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DEPARTMENTS

Foreign Abstracts; Notes and News; Book Notes; Crucible; Open Criticism; Round Robin Guild; Editorial.

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ON THE HILLSIDE.

By H. A. Latimer.

Against the neighboring hill
The sheep stand snow-white, as if a snowdrift still
Defied the Dog Star. Through the open door
A drowsy smell of flowers—gray heliotrope
And white sweet clover, and shy mignonette,
Comes faintly in, and silent chorus lends
To the pervading symphony of peace.
—Whittier.

# PHOTO ERA

The American Journal of Photography

Volume X JANUARY, 1903 Number 1

603
48 ...

The New-Year's Book

" Whatever hath been written shall remain
Nor be erased, nor written o'er again;
The unwritten only still belongs to thee;
Take heed and ponder well what that shall be."

—Longfellow.

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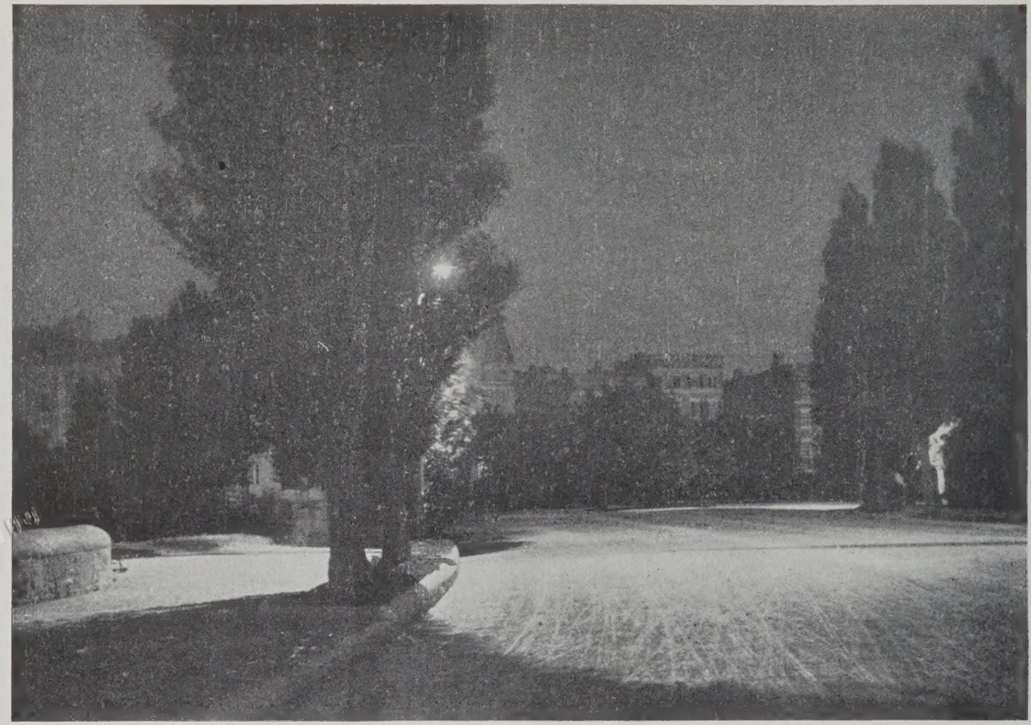
Our First Annual Photographic Contest

BY THOMAS HARRISON CUMMINGS

THE first issue of the Photo Era appeared in May, 1898. During the four and a half years that have since elapsed it has vindicated its right to live by exerting a wholesome and salutary influence on the progress of pictorial photography in America. Though our aims, at times, have been misunderstood we have always stood for what we considered the sound and healthy progress of artistic photography. In our selection and choice of pictures for reproduction in the pages of the Photo Era we have been influenced only by the broadest possible

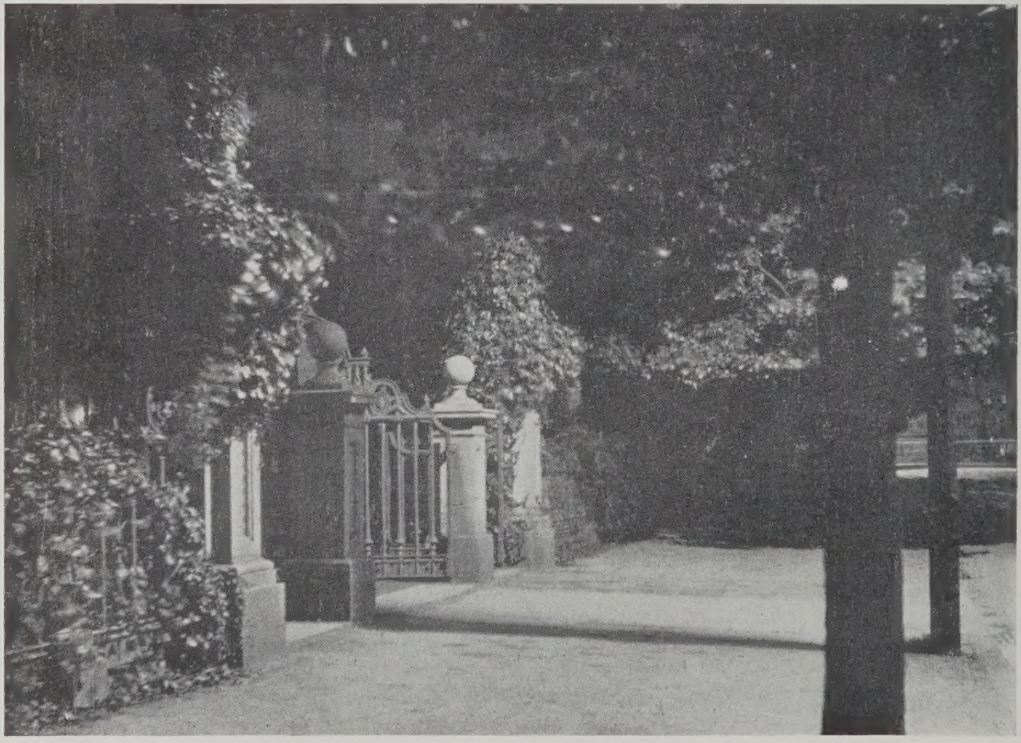
MIDWINTER. By Cora Stanwood Cobb.

Time, 5 P. M. Double Rectilinear Lens. Stop 8.
One second exposure. Seed's 26x Plate.



THE FENS AT NIGHT. By W. SCHREMPF.

Taken in the evening with a Steinheil, Antiplanet Lens, at Stop 3, with four minutes' exposure on Cramer Crown Plate.



ENTRANCE TO PUBLIC GARDEN. By W SCHREMPF.

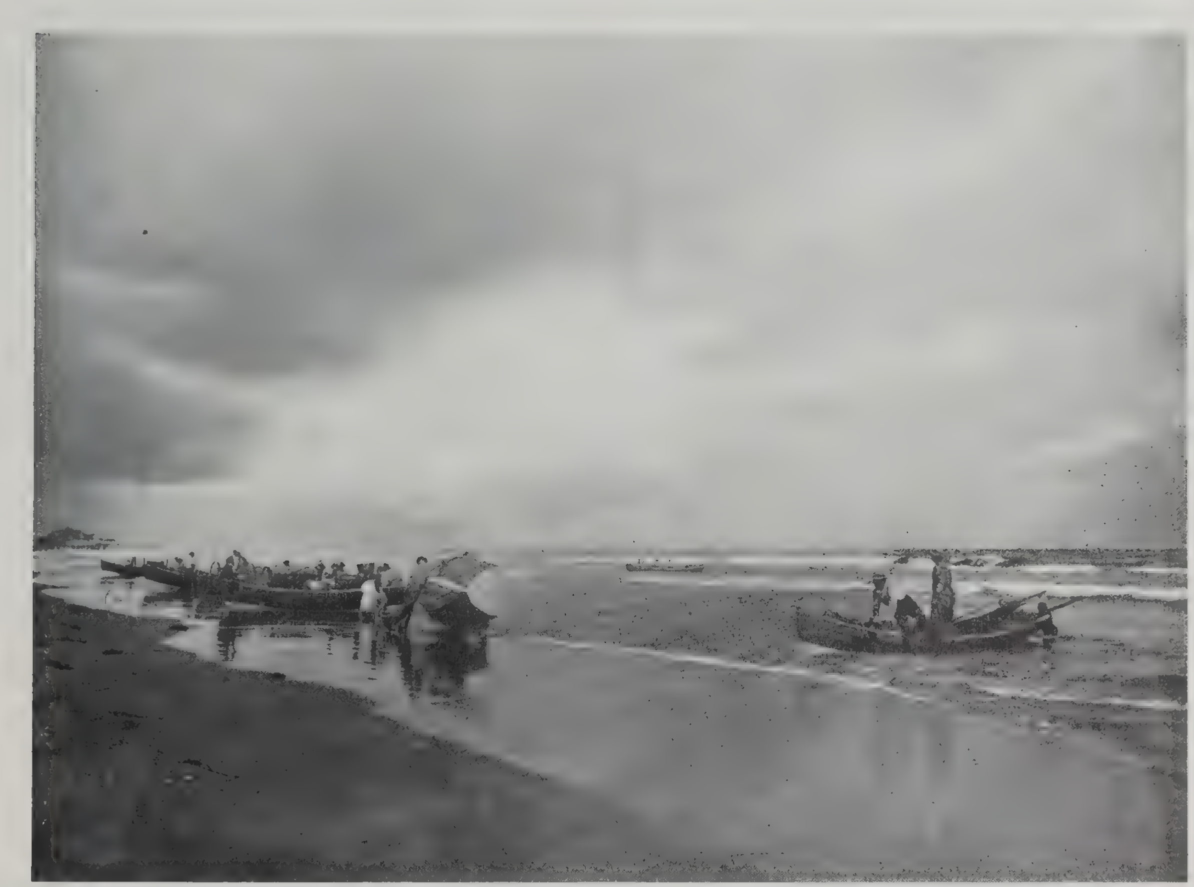
Seven minutes' exposure, Stop 3.

principles, recognizing no state lines nor sections. Besides artistic and technical excellence we have had but one fixed standard of selection, finally, and that is pictorial value. A picture might not be perfect from every standpoint, yet it should have pictorial value, at least, to secure our interest. Furthermore, in applying these principles we have not sought to follow any fashion or to recognize especially any school in photography. A high English authority has recently declared that "fashion in photography" and to a certain extent "schools in photography" tend to fetter progress. And, later on, it adds, in art there is nothing so fatal as dogma. We believe this to be true, and we offer this truth in explanation to those of our readers who have been disposed to question the artistic policy of the Photo Era in the past. We say, with the poet Browning:

> "The common problem, yours, mine, every one's,
> Is not to fancy what were fair in life
> Provided it could be; but, finding first
> What may be, then find how to make it fair
> Up to our means."

In other words, the policy of the Photo Era is to record the photographic art of our time as it really is, and not as we think it ought to be.

With this declaration of principles it is easier to understand the outcome of our First Annual Photographic Contest. The awards have been made with these principles in view, and we await the verdict of our readers with confidence.

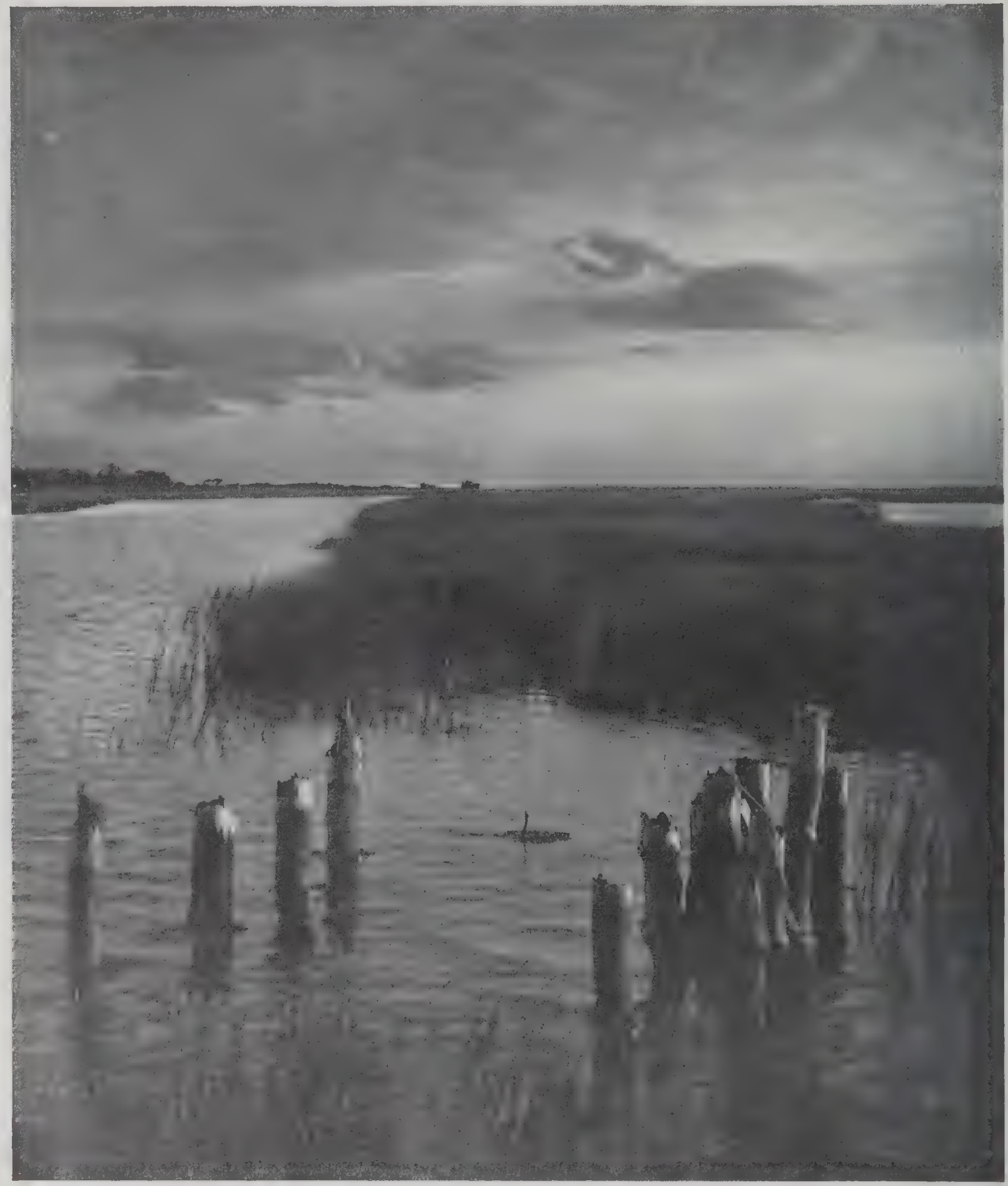


RETURN OF THE FISHERMEN. By J. Edw. Schiedt.

Time, 3 P. M., with Euryscope Lens. Stop F. 22. 1-10 second exposure.
Stanley Plate.
First Prize, Marine Class.

Out of nearly five hundred entries there is scarcely a poor picture in the whole lot. Indeed, the general average is of a very high order of merit, and the task of the Jury of Awards was by no means an easy one. It necessitated a thorough, critical, and exhaustive study of the comparative values of five hundred prints; all of them good, many of them equally good. To sift the wheat from the chaff where there was so much excellence was indeed a difficult task. We desire to congratulate the jury on their unselfish devotion, rare discrimination, and untiring patience shown in completing their work.

Awards have been made in the following subjects: Landscape, Genre, Marine, and Portraiture;



ON THE MEADOWS. By T. Edward Schiedt.

Time about 4 P. M. Weak light, one-tenth second exposure.
Stop F : 10. Orthonon Plate. Euryscope Lens.

and a first general prize for the best collection of pictures submitted.

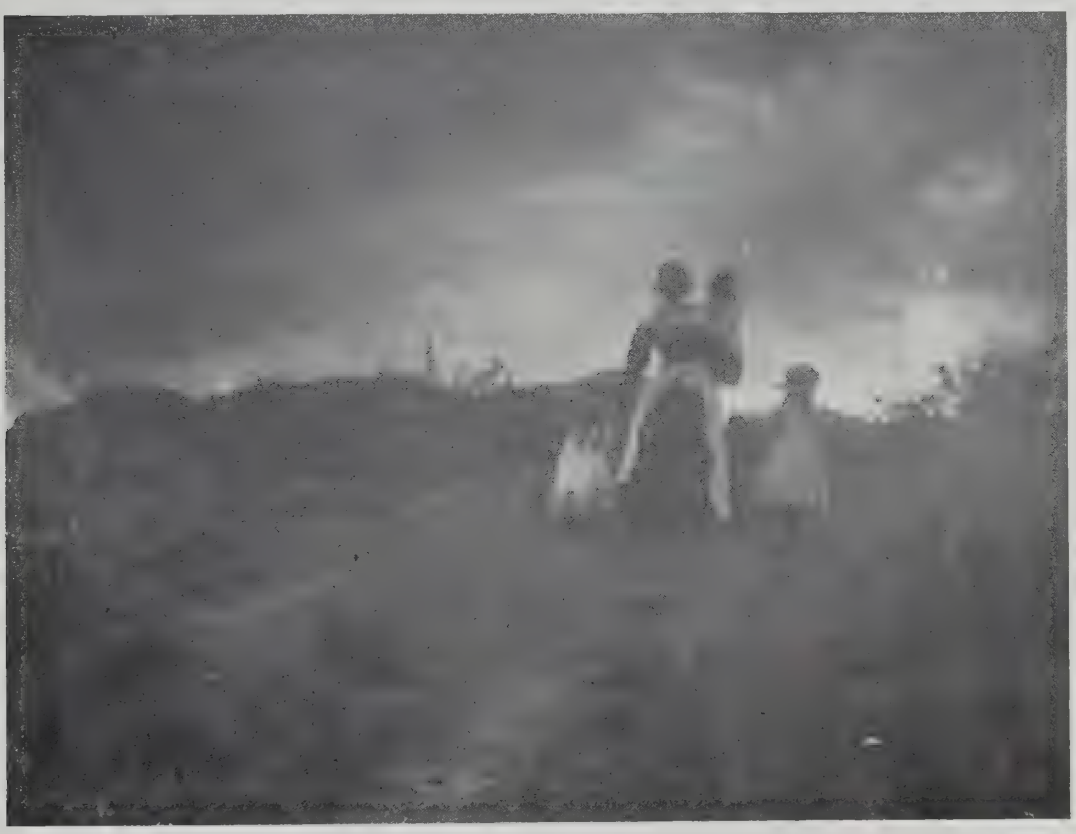
The first prize award in the Landscape Class is entitled "On the Brow of the Hill," by C. L. Newland, and is an effective study of rolling land, with an arrangement of figures that is admirable. Unfortunately the black and white tones of the plate very inadequately reproduce the soft, warm sunset colors which are given by the yellow high lights and the dark brown luminous shadows of the original sepia print. On the whole the pose of the little group of figures shows a good artistic knowledge of arrangement, in which the setting is admirable. It is one of the pictures to be remembered.

Honorable mention in this class has gone to a picture entitled "The Willows," by F. A. Carrier, a study in tree shapes and running water, on page 8 of this issue, which would really be of service to a painter.

It has a charming sunlit quality, and calls for much praise. If any criticism could be made of this print it might be that the details of the trees against the sky and the spotty foreground divide attention with the river and beautiful distance beneath the branches, which is presumably the chief motif of the picture.

The first prize in the Marine Class has been awarded to the picture printed on page 3, entitled "The Return of the Fishermen," by J. Edward Schiedt. The composition is strong and simple, and the sea and sky and atmosphere of the picture are very well rendered. There are times, in purely decorative work, when repetition of form is of great value — the repetition of boats along the beach here emphasizes the motif of this picture, without resulting in monotony. And it is just here that the genius of the artist has saved his picture from what might have been a serious defect. There are miles of low beach and surf stretching before the eye, giving a fine effect of distance. While the planes of this picture are well kept, every part is good in tone, and the whole picture is filled with interest and atmosphere.

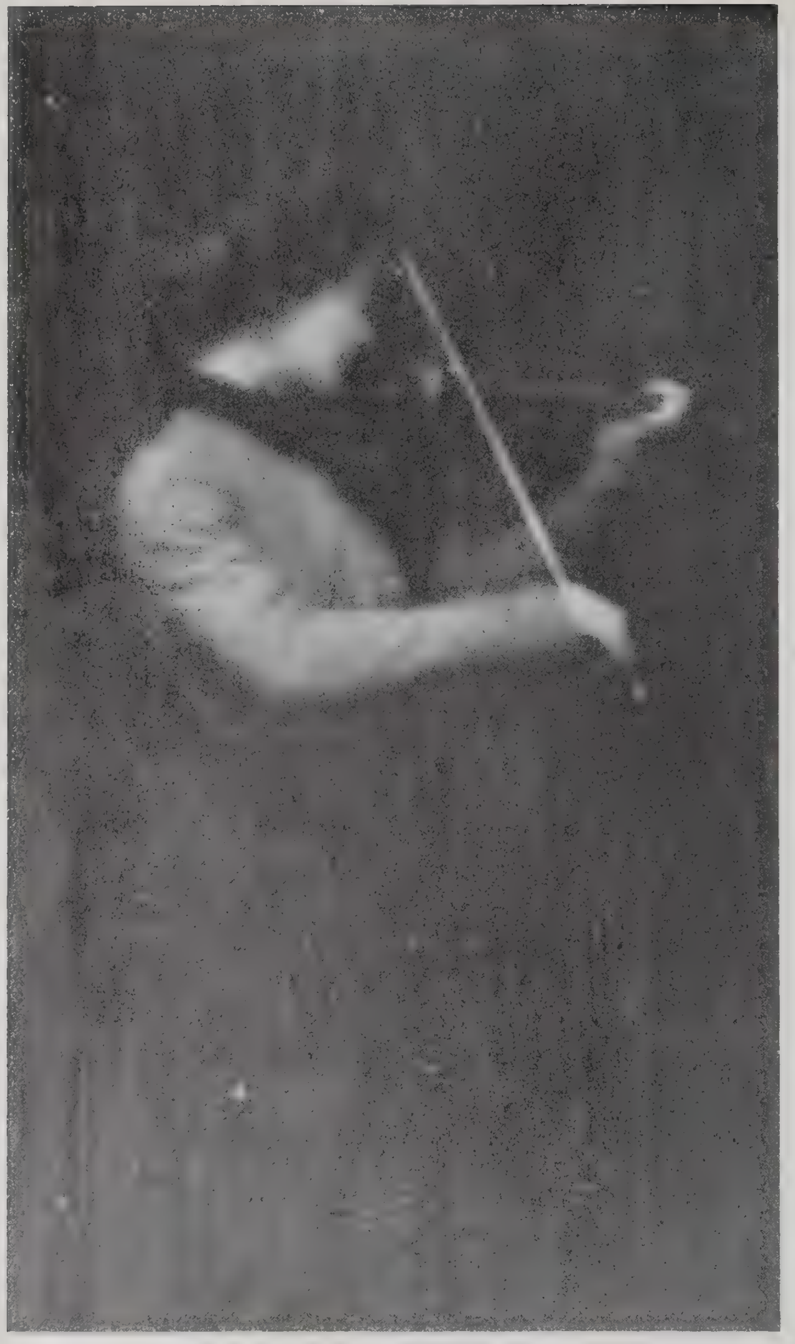
A second picture which divides the interest, though not strictly in the Marine Class, is "On the Meadows," by the same artist, and is reproduced on page 4 of this issue. It is a capital



ON THE BROW OF THE HILL. By C. L. Newland.

Time, 2 P. M., with Cooke Lens. Cramer Iso Plate. Stop. F.-8.
1-2 second exposure.

First Prize Landscape Class



CAVATINA. By W. A. Boger

Taken 11 A. M., with Goerz Lens.
Stop F.-8. 4 seconds' exposure. Cramer Plate.
First Prize Genre Class.

study of meadowland and sunlight effects, and is proof positive, if any were needed, of the versatility and strength of the artist.

The first award in portraiture is made to the picture of a child entitled "Judson," by Miss Nellie C. Knappen. It is an ingenious attempt to catch a child in a natural pose, and the low tone of the portrait suits well the pose and expression of the subject. Miss Knappen's name is well known in the American photographic world, and her work loses nothing of freshness or charm in this her latest attempt at portraiture. Two other portraits of children, entitled "Study of a Child" and "A Little French Peasant," by Mrs. W. W. Pearce, are published elsewhere in this issue, and divide the honors in this class of photography with Miss Knappen.

The first award for the best genre picture will go to "Cavatina," reproduced herewith on this page, an exquisite picture of a girl violinist, by W. A. Boger. It is a successful attempt to pose a graceful model. It is dainty and striking, and possesses a natural charm that is very winning. The lighting is soft, beautifully subdued, and there is just sufficient indefiniteness of outline in body and instrument to suggest motion. The pose of the head, the hands, the drapery, the massing of lights and shades all suggest evidences of thought and artistic feeling in treatment.

The special award in the Cloud Class has been made to S. I. Carpenter, whose excellent work in this branch of photography is already too well known to Photo Era readers to call for any special comment here.

No awards were made in the Historical Records and Architecture Classes, as the subjects submitted would hardly warrant it, in the opinion of the Jury of Awards.

On the whole, the contest for 1902 has been a great success. While we regret the absence of some well-known names from the list of entries, we feel that their absence has been made up by the newer workers, who are numerous and who possess enough real merit and interest in their art to promise well for the future.

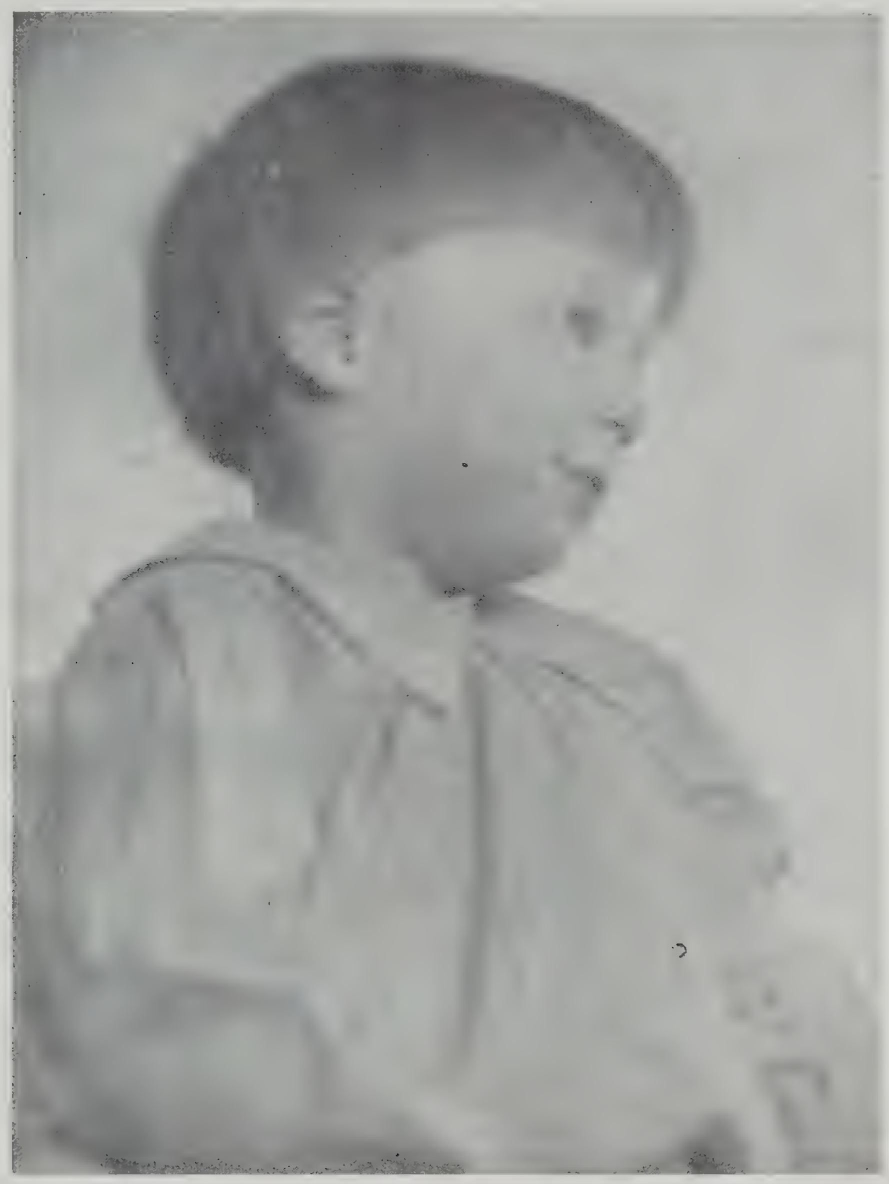
In closing, we again affirm that the advancement of photography as an art — not the glorification of certain photographers — is the sole aim and purpose of this annual photographic contest in our pages. We seek only to encourage the expression of individual thought in photographic work. We think a picture is good or bad, artistic or inartistic, in proportion as it conveys the artist's thought.

And it is only in choice of subject and arrangement of its light and shade and line that a photograph is purely an expression of the individual mind, and in the strict sense "artistic"; so, while the æsthetic appreciation shown by the choicest selection and the most pleasing arrangement in no way implies the capacity for the actual doing of the thing chosen, it shows a qualification of mind that is absolutely essential to such doing.

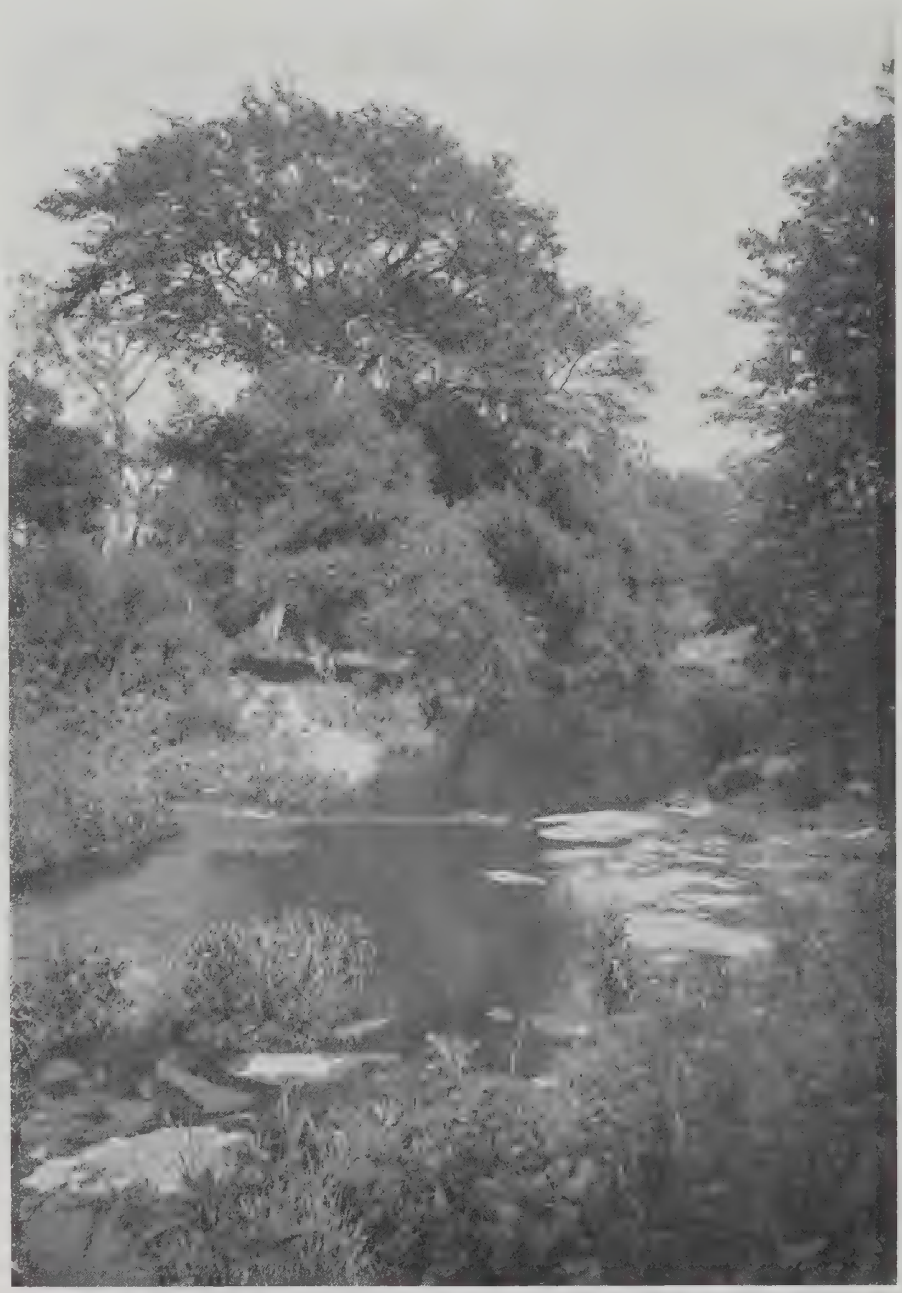
If we eliminate all that is fortuitous and all that is inevitable, and all that is the result of judgment, knowledge, and taste in timing, developing, and printing, and consider the pictures composing our first annual photographic contest only so far as the contributors are responsible for them, we shall find much the same kind of mind in them that we do in creative work of a high order. Nor can the fine art sense, the quick, keen appreciation of the pictorial possibilities of the subject, shown by some of the contributors be overpraised. It represents the high-water mark of cultivated work in American photography.

And we submit that the results of this first Photo Era contest furnish abundant food for thought and honest criticism and reflection.

Due notice will be given in our February issue of the grand prize award for the best collection of pictures, and also of the public exhibition of prints which will be given later, at the rooms of the Photo Era, 170 Summer St., Boston.



"JUDSON." By Nellie M. C. Knappen.
Time, 11 A. M., with window lighting and Zeiss Lens. Cramer Plate.
Exposure, 1 second.
First Prize Portraiture Class



Honorable Mention

THE WILLOWS. By **F. A. Carrier.**

Time, 3 P. M. Bright light, 1-2 second exposure. Bausch & Lomb Lens. Stop 64. Stanley Plate.

A New Graded-Light Screen

A NEW device for outdoor photography, and a very simple one, consists of a photographic light screen composed of two compensating prisms, one colored and the other uncolored, so arranged as to differentially qualify the light falling upon the sensitive plate or film. It is the invention of Dr. E. F. Beckwith, of Ionia, Mich.

The object of the inventor was to modify the intense light of the sky so that it would balance with the softer rays reflected from the landscape. The sky would, under the old way, be overtimed, tending to make an undesirable contrast. On the other hand, by the use of this simple device, the defect is done away with by a graded light. The top of the screen, being thick, softens the rays from high elevations so gradually that they are of the same value as the lower, darker rays. In this way the light under any atmospheric condition is made to fall upon the sensitive plate with what is said to be perfect uniformity. It matters not what the conditions, the inventor gets a splendid and perfect picture, either with a cloudy or clear sky.

"THE LITTLE ÆOLUS." By CORA STANWOOD COBB.
Time, noon. Double Rectilinear Lens. Stop 4. 1-25 second exposure. Seed's 26x plate.

Cloud Photography

BY H. MCBEAN JOHNSTONE

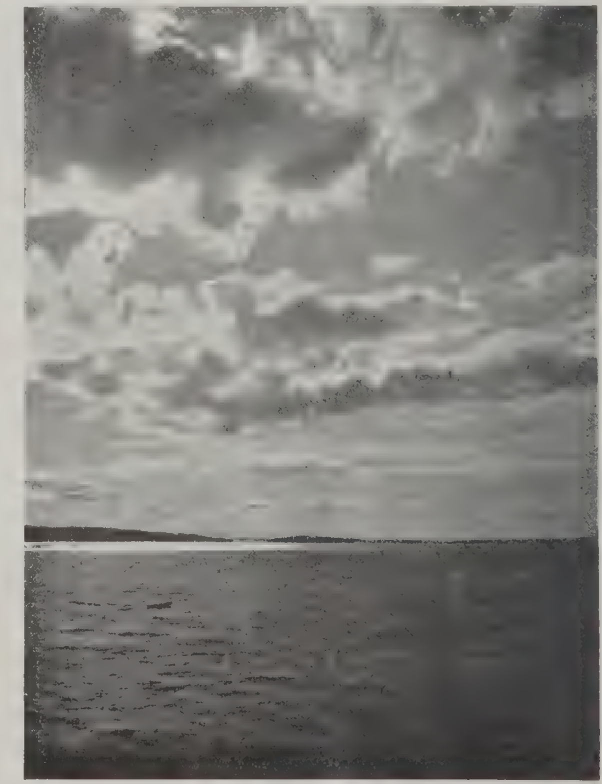
IN endeavoring to rid ourselves of baldheaded skies in negative-making it is impossible to adopt any one of three different methods. First, we may have real clouds, by which is meant those that were actually in the heavens when the exposure was made ; then, we may have real clouds printed in from another negative that had been made for its sky effect alone, or we may have artificial clouds faked on the back of the negative. Any one of the three schemes is productive of results that are superior to plain, white paper, though, depending upon the result aimed at, each way is apt to prove the best. For instance, in purely pictorial work there is small reason to doubt that the best results are to be had from printing in. To photograph a landscape alone, paying proper attention to light and shade, composition and arrangement of mass, is by no means a simple task. To do all this at its very best, and at the same time to watch for the most pleasing disposition of cloud lines, becomes almost an impossibility. In such a case, therefore, it is best to pay no attention at all to the upper part of the picture, trusting to be able to supply whatever is needed from some other negative at a later time, But then again, printing-in means work and delicate manipulations. Difficult even with Solio, Aristo, and other printing-out papers, how much more so must it become when one is in the habit of employing Dekko or Velox, or is making lantern-

A MACKEREL SKY. By S. I. Carpenter.

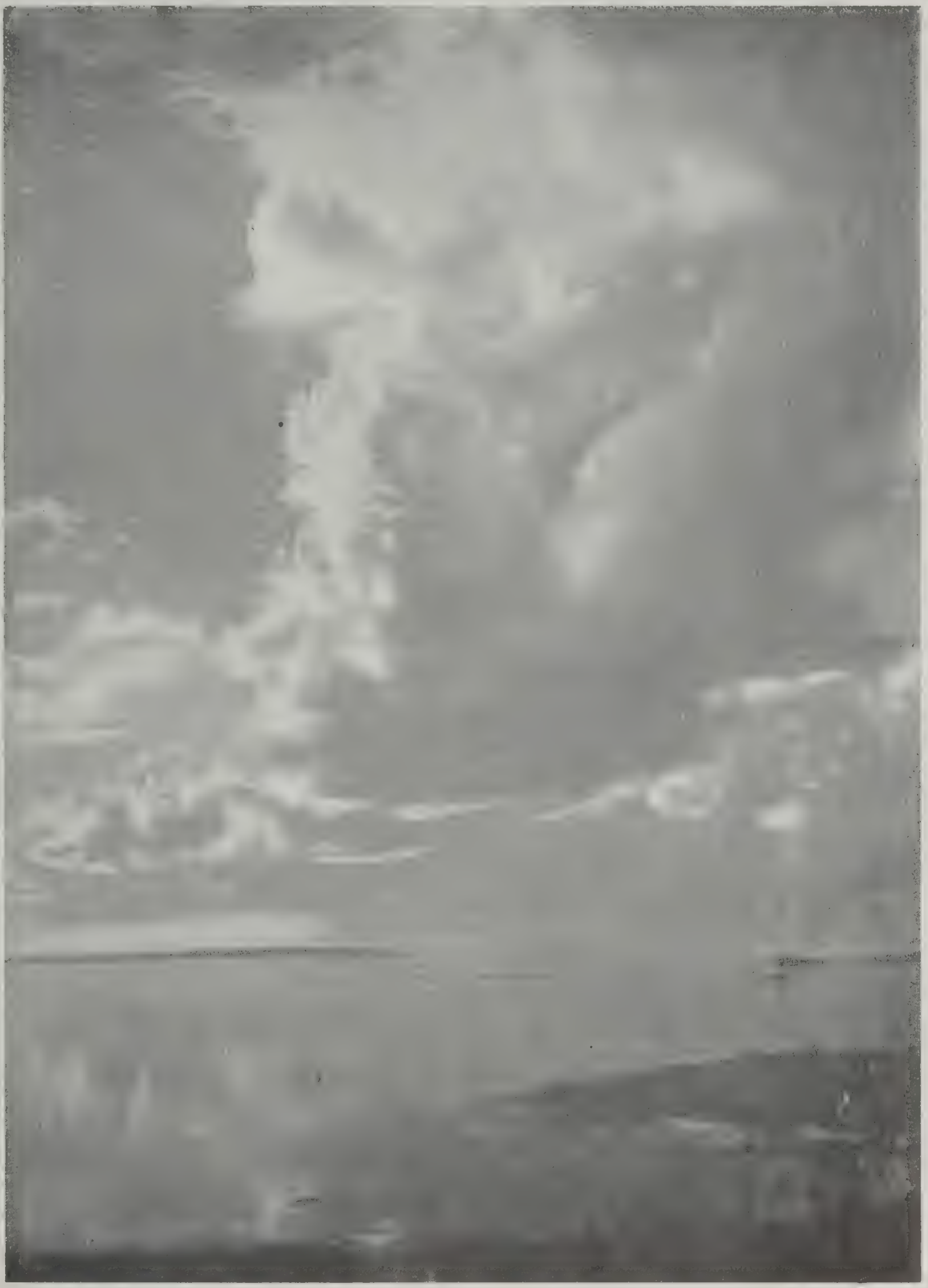
slides. Undoubtedly, for work of this type, where one has to judge exposures, the method where both clouds and landscape are included on one plate, has much to recommend it. Of those negatives where the clouds are supplied by faking on the back with lampblack or opaque only passing comment need be made. They have never been capable of commanding consideration in connection with the term pictorial, and never will be. The method's only claim for notice is that, in such prints as are intended for the engraver, it is better than nothing at all, inasmuch as it serves to break the monotony.

Just because so much has been said and written about cloud photography amateurs have gotten into the way of regarding it as something very difficult, and requiring all sorts of special ray-screens and plates. On the contrary, it is quite possible to obtain both clouds and landscape on one plate at one exposure, and on an ordinary plate at that. This can be done by what is referred to as a modified exposure, a method which consists in cutting off some of the light from the sky during the exposure. There are a number of simple ways of doing it. Perhaps one of the best is that which calls into play a shutter that is fastened to the lens tube by a hinge at the top, and that swings up and then down again to make the exposure. As will be easily seen, this allows more time on the landscape than on the sky, greatly to the benefit of both. Needless to say, this method is not suited to quick exposure work, and will call for a plate a trifle slower, perhaps, than the one you are in the habit of using. But a slow plate is no disadvantage. The thicker emulsion with which it is coated will allow of your securing more half-tone and gradation than a thinner and faster one would permit. Small obstructions, such as a tree or two on the sky line, will not interfere with this method of exposure, but, where there are mountains or a forest in front of the lens, the scheme will have to be abandoned or the middle of the plate will be underexposed.

In cloud photography, before one even considers whether or not an orthochromatic plate is a necessity, must come the question of halation and its cure. This is true whether only clouds alone are being photographed or both clouds and landscape on one plate, though with the latter it is more apparent. Suppose, as an example, you take a photograph of a sunset with a building in the foreground and cutting off part of the sky. Look at the halo of light surrounding it. The illumination appears to be too strong and to have spread out over the building. The explanation that it has been reflected back at an angle from the back of the plate is almost too old to refer to. But consider a moment something that you have probably overlooked because there was no building to attract your attention to it. If the light overspreads in one instance, what is there to prevent it doing the



" Swift scuds the flying cloud." By S. I. Carpenter.



"Praised be the art that can stay yon cloud
And fix it in such glorious shape." — *Wordsworth.*

By S. I. Carpenter.

First Prize, Cloud Class.

"Life all past
Is like the sky when the sun sets in it,
Clearest when farthest off." — *Rossetti.*

By S. I. Carpenter.

same thing every time? And, in a bright sky, who is ever going to notice it? Yet, the fact remains, it is there all the same, and just as much as it obscured the brilliancy of that building's edge, so does it detract from the clearness of outline of the cloud forms. Moreover, inasmuch as the edges of the cloud are usually the thinnest and most delicate parts, one of the chief beauties of the subject is lost. To avoid the difficulty a most excellent idea is to use the double-coated, non-halation plates made by some manufacturers. Though these are a trifle slower in their action, owing to the thickness of the film to be penetrated by the light, when one is using the shutter referred to herein, but little inconvenience results. Should one not care to go to the expense of buying such plates, however, ordinary plates coated with the usual lampblack backing are quite satisfactory. There are also a number of prepared backings on the market that are very simple and clean to handle.

The question of orthochromatic plates is more or less debated. Some workers contend that the most true to life results are to be had on ordinary plates, whilst others claim that a ray-screen and all the rest of that paraphernalia is an absolute necessity. The fact is, ordinary plates, under certain conditions, will give fairly realistic results. On a day, for instance, when we have very pronounced clouds standing out against a colorless ground of plain gray, there is no real reason why the ordinary plate ought not to supply all needs. Take, however, a day when the heavens are overcast with light, fleecy clouds on a blue field, and one will require both orthochromatic plate and color screen to get anything like truth in values. With an ordinary plate all would appear white and plain, owing to the fact that blue leaves are no impression on the sensitive film. But, even with all the proper equipment, it is no easy matter to render blue properly. A very common error that the tyro in cloud photography is going to fall into is the using of too dark a screen. The result will be that the picture will resemble that imitation, impressionistic thing that came out in the July number of the Photo Era, and the clouds will bear a strong resemblance to tufts of white cotton-wool pasted to a sheet of carbon-black cardboard. This is caused by the combination of the dark orange screen and the blue sky; the heavens take on a dark green tinge and do not photograph at all.

The difficulty is easily obviated by using a Bausch and Lomb ray filter and diluting the bichromate solution. Thus, it will be perceived that a very strongly defined cloud on a blue sky is going to necessitate a weak ray-screen and *vice versa*. But the only way to judge when a screen is too dark is to note the occasions on which it leaves the sky underexposed, and at the same time fully exposes the dark, heavy foreground. Color sensitive plates, particularly Cramer's, may be used alone and yield very satisfactory results. Inasmuch as they are partially corrected for blue in their making, they serve to show the contrast between those portions of the picture and such as are white or at least lighter. It goes without saying, of course, that a screen is unnecessary with a yellow sunset, just as at the same time it is understood that where the sky is red it is an essential.

While referring to sunset pictures, it may not be amiss to just mention and call attention to the falsity of the so-called moonlights made in this way. These pictures, so frequently made across a sheet of water, are the result of a short exposure with a small stop and a development long enough to secure white clouds and a dark ground for them. Their resemblance to a real moonlight is most remarkable owing to its absence, a fact which is easily proven by making a real moonlight and seeing it for yourself. In the genuine night picture, the foreground is the most brightly lighted position, the distance and heavens gradually fading away into nothingness. In the fake moonlight, the condition of affairs is just reversed and the distance is strong and clear with a dark, shadowy foreground. The real sunset picture requires a longer exposure, in order that the detail in the foreground may show when the sky has developed up to the correct density. If the amateur feels that he *must* have a "moonlight" he will find it better to secure it by full exposure and slight development rather than by short exposure and forced development. And with a long exposure, it is of course going to necessitate the use of backed orthochromatic plates to preserve the clouds.

Just a word or two on developing processes. To catch clouds on an ordinary plate, one must give a short exposure and carry on the process of development very slowly in a diluted solution. The more dilute the developer, the more often is it possible to save an overexposure. In such a case normal solution is out of the question. As the sky appears

"There are breadths of celestial horizons
Overhanging the commonest way."

By S. I. Carpenter.

"The cloudy pillar will guide by day,
The pillar of fire by night." —*Offord.*

By S. I. Carpenter.

and commences to stand out a little, more stock solution may be added for density but care must be exercised not to overdo it. Nor must one take any chances on overdeveloping in cloud work. In fact, if anything, rather err the other way. For the edification of those who have but a dim idea of the requisites of a good cloud negative, let it be stated that the principal characteristics ought to be an image devoid of fog, in which the range of half-tone is perfect and the extreme high lights fairly intense. A developer rich in pyro or whatever agent is used and weak in accelerator is useful with the aim of bringing out the high lights first and securing in them good printing power by restrained but not too weak developer. With corrected or color sensitive plates, development may be carried on with solutions of full strength. The only place where extra care is needed is to stop before the negative gets too dense, particularly when both clouds and foreground are on one plate. If the exposure has been made for the foreground and not for the clouds, every part of the plate ought to be done about the same time. The exact moment to stop development is when the sky commences to be a trifle more dense than the foreground. Remember that the sky half of the negative gains density twice as fast as the other part. A good idea is to keep the solution well over the foreground with occasional washes over the other part to prevent the formation of a definite line.

In the making of cloud negatives for the purpose of printing in with our landscape negatives, it must be borne in mind that clouds are subject to the same rules as terrestrial objects. No one would think of photographing them at the zenith and introducing them at the horizon, but, even so, proper care is not always displayed in placing them at the proper distance above the horizon line. In the first place the cloud ought to be taken with a lens of the same form as is used on the landscape, and the direction, strength, and quality of the lighting should be the same in both. In all cases either include the horizon line or mark the negative in some way, that you may not commit the foolish error of printing it upside down.

But to go on and deal with this subject any farther would make the yarn well-nigh endless. Perhaps the few remarks that have been made here will not do more than to point out the way, but once one starts on that way he very quickly learns much for himself that somehow never finds its way into print and that is, after all, the very essence of the matter. Suffice it to say, in conclusion, that the amateur who has never tried cloud photography has before him a new field full of unexplored delights and he would do well to lose no time in jumping in and doing a little experimenting.

ORIGINALITY

BY G. L. SMITH

Whatever pictures you produce, observe originality;
  To all the arts pictorial this golden rule applies,
So, keep yourself untrammeled by absurd conventionality,
  And do not strive to keep your prints the regulation size.
Let all your works bear witness of your individuality,
  Remember no two temperaments are ever quite the same,
So, see that your productions bear the stamp of personality,
  And never let the prints be overpowered by the frames.

—*Amateur Photographer.*

"Stay household pet
The while, I set
To catch thy charms, a sunbeam net.
Charms of the bud that, hour by hour,
Old time is changing to a flower."

Honorable Mention.

STUDY OF A CHILD
By Mrs. W. W. Pearce

Taken at twelve o'clock with Voigtlaender Lens working at largest stop. Exposure, two seconds. Cramer Crown plate.

Photography as Applied to Illustration and Printing

[Abstract of Cantor Lecture delivered at the Society of Arts, London]

BY J. D. GEDDES

THE LINE BLOCK PROCESS

THE first requisite for the production of a good result in the line process is a suitable original: the drawing should be made with perfectly black lines throughout; it is of no consequence how thin the lines are, but they must be black; it is important, too, that the scale of reduction should not be too great; the best proportion is for the drawings to be made about one third larger than the required block. The paper used for the drawing should be white and smooth in texture.

The negative for a line block is made preferably by the wet plate or collodion process, because of the facility with which these plates can be intensified and the clearness of the lines; the negatives for this process must be reversed, so that the resulting picture may be non-reversed, which result can be obtained in two ways, first, by photographing through a prism or mirror attached to the lens, or second, by stripping the film, carrying the image off the glass, and turning it over.

The reversed negative is next printed on the metal which is to form the block in the following manner: — A piece of polished and perfectly flat zinc is cut to the proper size, and freshly polished in water until it is free from all trace of grease; it is then sensitized by either flowing over it a solution of asphalt in benzol, or, as is more generally used because of its rapidity, a solution composed of egg albumen, water, and bichromate of ammonia; an even film of this solution is floated over the metal, and is dried by gentle heat; as soon as it is dry, it is sensitive to light, and is at once placed in a printing-frame over the negative; a few minutes' exposure to daylight, magnesium, or electric light, is sufficient to oxidize the albumen where the light has obtained access to it through the lines of the negative; the plate is then covered all over with a thin coating of ink from a printer's roller charged with ink, to which a little turpentine is added, and is then dropped into a flat dish containing cold water; the inky surface of the plate is then gently rubbed with a pledget of cotton-wool, and the ink coating, together with the unused albumen, leave the plate together, except in the places where the light has acted through the negative and rendered it insoluble, the result being an image of the subject photographed on the metal, covered with a greasy, acid-resisting ink; in this state the plate is ready for the first stage of the etching process that is to etch or bite away with acid all the metal surrounding the lines, and render the pictures in high relief, so that it may be printed in a printing-press in the same way as type. The etching of such a plate is the simplest thing possible in the abstract, but a considerable amount of skill and experience is required to carry the etching to a successful issue.

The theory is that a metal like zinc is quickly dissolved or etched by nitric or hydrochloric acid, so long as there is no grease or varnish on the metal to interfere with the dissolving action of the acid; that is so, but in the case of the plate we have to deal with a very thin protective coating, and with lines which are so narrow that they might be represented as knife ridges. There is also an element to be reckoned with in the fact that the acid not only etching downwards, but sideways. It is, therefore, necessary to proceed with some caution, and the first etching is performed for a few seconds only in a very weak acid, just strong enough to taste acid: after this the lines are slightly reinked with a roller, and whilst the ink is wet, it is dusted with powdered asphalt or resin, and afterwards heated to melt the powder into the ink. The etching proper is then proceeded with, and occupies two to five hours, but it is by no means a straightforward operation. For a time, every few minutes the plate is taken out of the acid bath and further strengthened with ink and resin, and as the etching proceeds, the piled-up ink on the lines is heated and melted, so that it runs down the sides of the lines, to protect them from being undermined by the acid — when a sufficient depth is attained to make the lines high enough to ink sharp and clean in the printing-press, the whole of the etching ink is removed, and the tops only of

A STUDY IN STILL LIFE. By Marion S. Gaines.

the lines carefully reinked. A finishing etching is then given to remove the shoulder and steps on the sides of the lines caused by the various inkings and melting. When finished, a properly etched plate should have each line firmly and cleanly cut, and be supported by a pyramidal-shaped base. The plate is now ready to be trimmed and mounted on wood type-high for the printing-press.

REPRODUCTIONS OF WASH DRAWINGS AND PHOTOGRAPHS.

Save as regards line blocks, until early in the eighties, it can be said that there was no process in existence by which paintings, wash drawings, or photographs could be "processed," to use a bad term, into the form of a surface-printing block for the press, and the introduction then of the half-tone block marked an epoch in the history of photographic illustration which has done more to revolutionize the making of pictures than almost all the other processes put together. The origin of the process cannot be definitely claimed by any particular investigator. Its development was the result of a kind of evolution of Bullock's process of 1866. Meisenbach, of Munich, patented a half-tone process in 1882. Mr. Ives, of Philadelphia, Mr. W. B. Woodbury, and others were experimenting and publishing results in rapid succession, until within a period of a very few years the process as it now exists was practically established. I recollect very clearly the "dark ages" of the half-tone process, when all kinds of expedients were adopted to break up the gradations of a photograph into lines or dots by the interposition of a texture of silk or fine linen; also the days of wire gauze, ruled lines on paper, and other similar processes. The Americans were first in the field with an improved device for breaking up the image into dots, which was so much superior to anything invented in Europe that almost every other method was dropped in its favor. I refer to the diamond ruled screens made by Mr. Max Levy, of Philadelphia. These screens or gratings are so essential to a description of the half-tone process that I will occupy a few minutes of your time in telling you how they are made. A sheet of the finest plate glass is selected and is coated with a varnish composed of asphalt and wax. The coated glass is placed on the bed of an automatic ruling-machine of extremely accurate construction, and capable of ruling lines of any degree of fineness up to 500 to the inch, the cutter of the machine is diamond pointed and gauged to cut lines of any desired width. The lines are ruled diagonally at 45 degrees across the glass, and the number to the inch varies according to the kind of work for which the screen is required; for newspaper printing the lines may be 50 or 60 to the inch; for commercial and catalogue printing, 100 to 130;

"It all comes back, the odor, grace, and hue,
Each sweet relation of its life repeated." — *Whitney*.

By Marion S. Gaines.

and for finer magazine or book illustration, 150 to 200 to the inch. When the ruling of the glass is completed, the ruled surface is subjected to the action of the hydrofluoric acid which eats into or etches the lines laid bare by the diamond, and forms a channel which is filled up with an opaque pigment. This enamel is baked in the lines in an oven, and then the surface is carefully polished until the lines are perfectly level, and the spaces represented by clear glass are bright and transparent. Two of these ruled glasses are required for each screen, laid together with the lines crossing at right angles, and cemented with Canada balsam. As may be imagined, the screen gratings are somewhat expensive, a piece measuring 12 x 10 inches, of 175 lines costs about £25; whilst large screens of 24 x 18 inches are charged at £100 or more. I am glad to state that we have now an English firm (Messrs. J. E. Johnson & Co.) who rule these screens excellently; indeed, there is little to choose between this work and the best American, which is a comforting thing to say in these days, when it is habit of the ever-present pessimist to decry everything that is English and all that the Britisher does.

To produce a half-tone block from a picture, wash drawing, or photograph, this ruled grating is placed in front of the sensitive plate, but not in contact with it. The screen distance from the sensitive plate is a point of importance in making the negative, and the skilful operator has to determine this distance according to his experience, and to the character of the subject which is to be photographed. If it is placed too close, the resulting negative will present what is known as a gridiron-appearance; if it is too far away, the dotting will be too close in the lights and too small in the shadows. You will understand how necessary it is to keep a nice balance in this matter in the case of a picture which is built up entirely of an infinity of dots, shadows being represented by grouping of dots, close together, with smallest of spaces between middle and light tones, by dots of different graduations in size, and the highest lights of pin point dots only. Everything is represented by dots, yet they are so accurately graded in relation to the light and shade of the orignal, that the eye does not detect them unless examined closely, and the half-tone picture appears as a practical facsimile of the original from which it was photographed.

LITTLE FRENCH PEASANT. By Mrs. W. W. Pearce.

Taken at 12 o'clock, with Voigtlaender Lens working at largest stop. Exposure made in two seconds. Cramer Crown Plate.

The method of printing half-tone negatives on metal is similar in most respects to that described for line blocks on zinc, with this difference, that most half-tone blocks are now etched on copper, and the sensitizing solution generally employed for this metal is a compound of fish glue, albumen, chromic acid, water, and bichromate of ammonia. The copper is carefully cleaned with Tripoli powder, and washed, the sensitizing solution is then flowed over it twice or three times, and placed on a revolving table, where it is rapidly whirled, in order to spread the coating thinly and evenly over the whole surface; the coating is then dried by gentle heat in a yellow-lighted room, and the plate is now ready for exposure under the half-tone negative; three to ten minutes' exposure to an electric arc light completes the printing, when the plate is removed to a bath containing cold water, and soaked and washed under a spray of water until the unacted-upon compound is dissolved out, an operation occupying five or six minutes. The image on the metal at this stage is almost invisible. In order to enable an examination of the film to be made, the plate is dipped into a solution of methyl violet, which dye immediately stains the film, and brings the picture into view. If all has gone well, the surface is dried either by flowing it with methylated alcohol or gentle heat. The next operation has an important effect, namely, a hardening of the delicate glue picture into a substance resembling enamel, and this gives the method its name — the enameline process. The plate is simply heated to a high temperature over the flame of a large Bunsen burner; during the progress of this "burning in," or enameling, the image changes curiously; the blue picture gets pale, then grey, and eventually vanishes entirely; after a few seconds, as the plate gets hotter, the image appears as a faint brown, and gradually increases in strength until it fully attains a rich chestnut brown tint, when the heat must be withdrawn, and the plate is cooled off. The plate has now a picture fixed upon it, which is formed of a strong, hard, impermeable coating of enamel, and which will bear any reasonable amount of etching without further protection. The etching bath is made up of neutral perchloride of iron dissolved in water, and of a strength which registers thirty-five degrees with a Beaume's hydrometer. The plate is first subjected to a general etching all over the plate, sufficient to give the block a printing depth; that is, to etch away the spaces round the dots forming the picture, so that the plate may be inked over with a printer's roller charged with ink, and a first proof of the photo-etched picture pulled in the press. In most plates made by this process a further and local etching must be performed. The dulling of the general effect caused by the interposition of the necessary screen grating has to be removed as far as possible, and this is done by artists who are specially trained for the work. The parts of the picture which are in shadow and are usually correctly rendered by a properly-exposed negative, are covered over with varnish, and the next tones are etched again, then these tones are covered up, and the high lights are treated until the resulting picture, when proofed correctly represents the original. The plates are then trimmed by engravers, beveled to admit of being riveted to the wood mounts, and are mounted type-high for use in the printing-press.

Many efforts have been made during all the years these mechanically grained blocks have been in use to find a means of producing a printing surface which would give a pleasing result with an irregular grain like that given by collotype or photogravure, but the results so far have been disappointing; perhaps some of this disappointment may be due to the fact that the eye has been trained by years of use to look for and expect the smooth, clean results given by the mechanically ruled screen, and that any other result, though it may in a measure be more artistic, is not acceptable. I would like to mention, however, in closing this lecture, that Mr. Wheeler, of Bushey, has introduced a new screen for half-tone work. This promises much in the direction of the making of pictures which are free from mechanical effect, and are yet sufficiently delicate in texture to retain the finer details. His screens have no pigment in the graining; they are formed by a delicate etching of the surface, which leaves the plate very transparent, and the breaking up of the image to form the printing surface appears to be formed by causing the surface of the screen to act as if it were made up of an infinity of lenses. Some examples of this process will be shown to you, and will be found extremely interesting.

"After the Maytime and after the Junetime
Rare with blossoms and perfumes sweet."

By Marion S. Gaines.

THE CAMERA FIEND.

(Written for the Photo Era.)

LILIAN M. RATCLIFFE.

◆

Camera! Camera! Camera!
For breakfast, dinner, and tea,
And I would that my tongue dare utter
The thoughts that arise in me,
But, alas! there's a law for too much jaw
While the camera fiend goes free.

Camera! Camera! Camera!
No matter how fine the days
The dark room's charms and the ruby glow
Are better than old Sol's rays;
And the cat and the dog and the chimney log
Have been "took" in a hundred ways.

Camera! Camera! Camera!
I never shall feel the same,
I've a simpering gaze which I cannot brook
And posing is all to blame;
While the conscious look of this shady nook
To me is a burning shame.

Camera! Camera! Camera!
The world is no longer the same.
Since my landscapes were foggy and failed to please
The plates I say are to blame.
But my three-legged horses and houses like trees
Have brought me undying fame.

THE LANE TO THE LAKE. By H. G. Dorsey. A ROCK-BOUND ROAD.

THE true artist will always try to get the most possible out of his particular medium, and always in such a way as to honor it best.
— Wm. Morris.

ONE ought never to forget that by actually perfecting one piece one learns more than by beginning or half finishing ten. Let it rest, let it rest and keep going back to it and working at it over and over again until there is not a note too much or too little, not a bar you could improve upon. Whether it is beautiful also is an entirely different matter, but perfect it must be . . . perfected, unassailable. — Johannes Brahms.

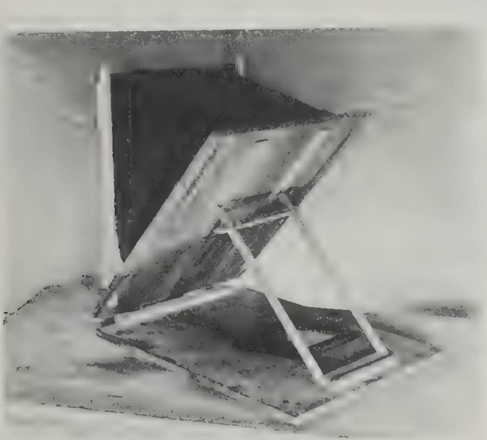
TRUE art consists neither in altering nor improving Nature, but in seeking throughout Nature whatsoever things are lovely and whatsoever things are pure. In loving these, in displaying to the utmost of one's power such loveliness as is in them, and directing the thoughts of others by winning art and gentle emphasis. — Ruskin.

"Beauty oftenest waits on simplicity."

The Making of Two Useful Articles

BY AUSTIN K. HANKS

THE two articles which I shall try to describe are, first, the retouching frame; second, a device for holding securely the metallic cut-out forms while cutting prints oval, circular, or in other shapes, by means of the metallic cut-out and wheel.



No. 1. Retouching Frame. Rear View.

As the above and other devices which are manufactured for the aid of the amateur photographer are all more or less costly, and as the expense of the absolutely necessary articles is by no means slight, I shall do my best to explain how these two, which are indeed of great assistance, may be made for a mere trifle.

First, the retouching frame. This is very simple to construct and can easily be made in a few hours.

The main body consists of two pieces of wood, each 13 inches wide, 18 inches long, and 1-2 inch thick. The lower one or baseboard is bound on the bottom, about 2 inches from each end, by two strips 1-2 inch square 11 inches long, to prevent its warping. On the upper side (as shown in illustration 1) is a strip 1-2 x 1 x 10 inches at the extreme of one end, to which the upper board is fastened by two hinges.

At the other end, two strips, one 1-2, the other 3-8 inches high, and about 6 inches long. To the smaller strip we nail the ends of a support; two strips 3-8 inches square, 12 inches long, pointed at the upper ends, the lower ones being rounded to permit folding; these are held securely apart by a strip 3-8 x 8 inches, about 1 1-2 inches below the pointed ends. To the lower side of the upper board fasten two pieces of soft wood 1-8 inch thick, 1 x 6 1-2 inch, in which is cut a series of holes 1-4 x 1-2 inch each. The pointed ends of the support fitting in these holes, permitting the upper board or working surface being adjusted higher or lower as wanted when in use.

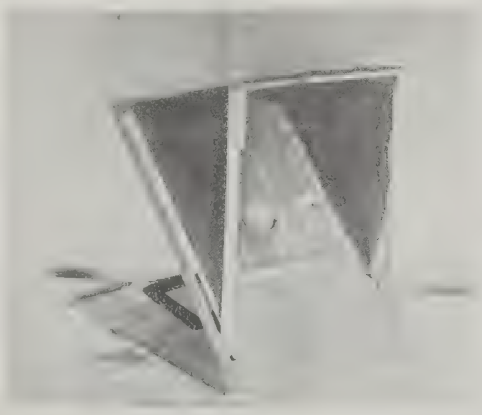
The upper side (as shown in illustration 2) forms our working surface. In the centre is cut a circular hole 2 inches across, the lower side of which is covered with a piece of ground glass 2 1-2 inches square (ground side up), this admitting the light by which to work.

The majority of retouching frames have a large opening of ground glass which illuminates the entire negative. The smaller one is preferred by the writer, as it allows only a small portion to be illuminated at a time, thus making it easier to work, also helping to center the attention on the particular part being retouched.

We now need a piece of tin 7 x 8 1-4 inches, in which is cut an opening 6 x 6 3-4 inches, leaving a frame 1-2 inch wide each side, 3-8 inch at the top, and 1 inch at the base, 1-2 inch of which is turned over, leaving a little groove which holds the negative.

The tin is not stationary, but fastened by two small tacks near the inside edges of the two sides, opposite which is screwed, about 1-4 inch from the outer edges, two screw-heads or handles (such as are used for cupboard doors, window-screens, etc.) This permitting raising or lowering the negative so as to have the portion to be retouched over the opening as desired.

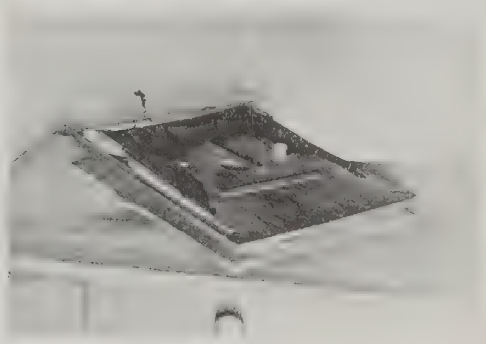
We now cut 1-2 inch from each side, two openings 1-2 x 16 inches, making a sort of frame with strips 3-8 inches square; the two side ones 15 1-2 inches long each, the top one 13 inches. These strips are connected with the upper surface by black cloth, forming a hood as shown in illustrations 1 and 2. The hood is held in place by a strip 11 inches long. This cuts off the light from the



No. 2. Retouching Frame. Front View.

upper surface of the negative, it being necessary to have the light come from the under side when working.

Also is needed a piece of ordinary mirror glass about 5 x 6 inches, to reflect or strengthen the light passing through the ground glass and opening from beneath.


No. 3. Retouching Frame. Folded.

The entire cost is as follows:

2 1-2 in. boards 13 x 18 in.	.20
1 piece tin 7 x 8 1-4 in. with opening cut	.10
2 screw-handles	.05
2 hinges	.05
mirror	.10
Total cost,	.50

Many will have a piece of mirror which will answer O. K., and all, doubtless, will have nails, strips of wood needed, also a piece of ground glass 2 1-2 inches square; thus, the entire cost is but half a dollar. Nowhere could one be bought for that, or one with which you could do better work.

Our retouching frame is now complete. Before passing to our second "useful article" I shall endeavor to give a few points of advice to the beginner; also, perhaps, to the more advanced.

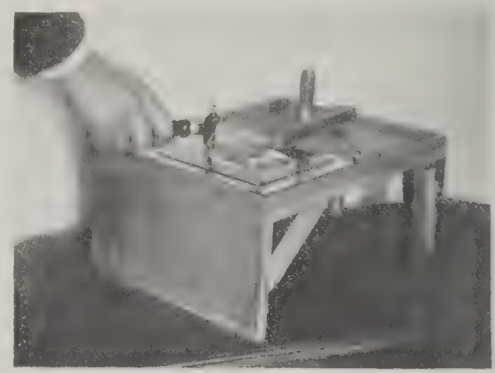
In using the frame it is well to work near a bright window, placing it on a convenient table or other support, also to have the mirror held by a block of wood or other article, so as to have the reflection strike the ground glass and opening.

The outfit which is needed in use with any frame is, for retouching faces and heads, a retouching "medium," two or three grades of hard pencil, 6, 4, and 2 H of Faber's Graphite leads, also a very fine sandpaper pad to sharpen them to a needle's point. For removing pin-holes, Nos. 1 and 3 Red Sable spotting brushes and a half pan of Paine's Grey, or lampblack.

In retouching faces we first apply to the gelatin surface the retouching "medium," this giving a "tooth" on which to use the pencil; using barely enough to go over the part to be retouched. The negative is then laid on the inclined surface with the head over the opening. With one of the hard pencils previously sharpened to as fine a point as possible, and with a gentle but decisive stroke, apply the pencil to the *lighter* spots or portions in the face, it being borne in mind that the high lights are dark, and the darker portions or shadows are light in the negative. For instance, with any one having a number of freckles there is a mass of light spots in the negative. We apply the pencil to them, one by one, until we have a soft half-tone over the entire face, with the result as shown in plate *I*. As will be seen in *A* (which is from the unretouched negative) our subject has a sufficient supply of freckles which have been more or less exaggerated by the lens. The improvement will readily be noticed in *B*, which but faintly portrays the beauty of our little subject, and by the additional means of retouching we are enabled in part to "do her justice." The illustrations are not what might be termed skilled work, but serve to show what can be done in an amateur way.

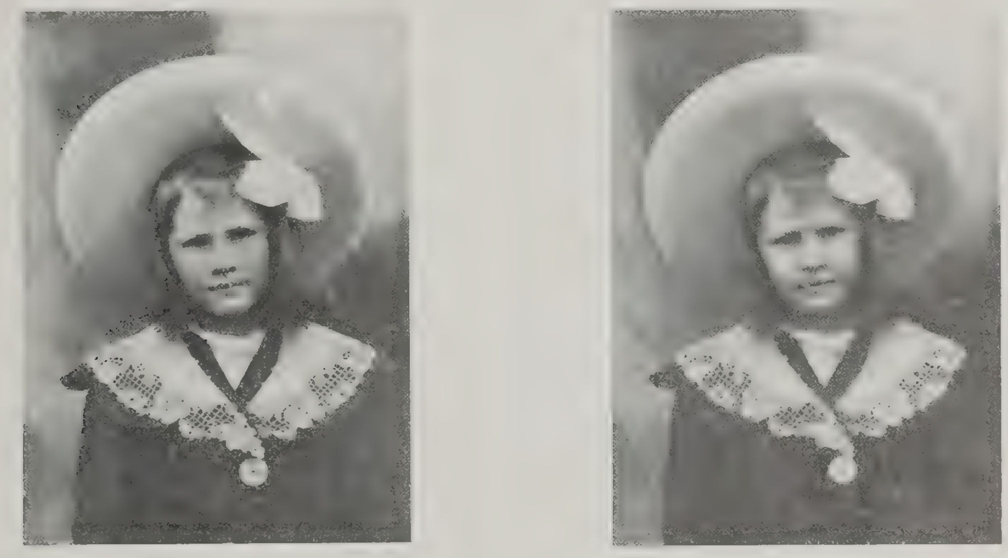
Retouching is not difficult; it is intensely interesting, and, with a little perseverance and practice, most any one can in a short time do very pleasing work. If it is not right the first time, or in fact at any time, all of it can be removed without injury to the film, by going over it with a cloth dampened with turpentine. Then try it again.

One point of service which was given me by a professional retoucher is, "work with the grain of the skin." For instance, with more elderly people there is apt to be a few wrinkles in their foreheads, sides of the face, or chin; now, because the plate is in a vertical position do not try to make vertical strokes with the pencil across the wrinkles (which are light lines in the negative), but work *with* them, and not opposite to them; make the strokes in the same direction as the lines. The same applies to all portions of the face; work with the lines, but do not take them all out; do not remove every line you can possibly find, as some of them are lines of expression; these should not be removed or taken out.


No. 4. Device for Holding Metallic Cut-out Forms.

Some have more prominent bones under the eyes, some more prominent jaw-bones than others; for those who have, do not persist in making the negative one *even* tone, but blend one into the other and the difference will be marked. The more prominent parts or lines may, with care, be blended or softened without marring the modeling, as, if the negative is over-retouched the modeling, or expression, is partially or entirely lost.

At first it is well to make a number of proofs. Do a little retouching, make a proof and carefully study it; then do a little more, print another proof and note the difference; then again, and again. In a short time you will soon learn which should and which should not be taken out, and with a little patience and perseverance you will be able to do retouching that is not to be despised.


Before and After Retouching.

Removing or rather spotting the "pin-holes." This is done with a very fine brush and Paine's Grey, or lampblack mixed with water in the same manner as water-colors. Success lies in having the spotting the same shade as the surrounding film. The brush should taper to a fine point and be applied to the center of the hole. But should the spot show white in the print it can easily be covered with lampblack in the same way.

People as a rule advocate using India ink in spotting prints, but as a friend said, "when you dilute it, it changes its color and does not remain a pure black." Lampblack does not, but remains black whether light or dark, and is much preferred by the writer. By careful after-spotting of the prints, the "pin-holes" and other defects in the negative will easily be removed and no one, without a microscope would ever notice it.

Another very excellent idea which is partially in the same line, is what might be termed "dodging" or "faking." It may be known to most of us, while, perhaps, not at all to others; but for the numerous opportunities it affords for vast improvement, it is well to speak of it here in connection with retouching.

The "dodging" is accomplished by pasting over the front of the printing-frame a sheet of superior quality white Japanese tissue paper, the use of French crayon sauce, and an ordinary stub.

It is quite difficult to always find a proper place and light in which to work, and very often when the circumstances are favorable, we do not have a pleasing lighting, which could be much improved, while at other times we either have to work under difficulties or not at all. The latter being the case with the accompanying illustration (A, plate II), as it will readily be seen that the light was much stronger on one side, also that the negative was considerably underexposed; this was made necessary as the little one is naturally nervous, the plate receiving less than two seconds' exposure, with the result as shown.

The second illustration (B, plate II), shows a print from the same negative with combined retouching of the negative and "dodging" in printing, but without any intensification or reduction. You can judge for yourself the possibilities it affords for improvement.

The retouching was very slight, barely enough to soften the high lights, the remainder being accomplished in the printing. As before stated, we first paste a sheet of fine, white tissue paper over the entire front of the printing-frame (this leaves about 1-4 inch between the negative and tissue paper). After the paste has thoroughly dried, place the negative in the frame as usual, then carefully study the thin or transparent portions of the negative (which need to be restrained in printing) by holding negative and frame on an even plane with the eyes (having the negative snug in one corner of the frame), then take a piece of crayon sauce and with a circular motion go carefully (on the outside of the tissue paper) over the most transparent portions in the negative, and with a stub shade it to the edges of the thin portions, also evening it in the center. Then print a proof; if it needs still more restraining darken those portions by again going over it with sauce and stub; if less, lighten it by gently going over the darkened places with an unused stub or finger-tip. It is also necessary to keep the frame in constant motion while printing, to prevent the grain in the tissue paper from showing, also to help graduate the portions darkened by the sauce, thereby preventing any of the manipulation showing in the print.

This little trick of "dodging" can be used to great advantage in many different ways, and its aid is practically unlimited.

After a few trials and a little perseverance, you will soon get into the nack and be able to "fake" very successfully.

Our little talk on retouching is concluded, and I shall now speak of our second useful article which needs no after-lesson, but simply a few words regarding its construction.

The little device, as shown in illustration IV, consists of a board or platform 10 x 13 inches on which is fastened securely a piece of plate or other heavy glass, 6 x 8 inches, about two inches from the end by means of six screw-eyes. We then secure a small wooden hand-vise, the lower part of which is stationary, being fastened to the under side of the platform which is built with two legs and a solid board all of which are five inches high, to permit free access to the lower or under handle. The solid board, at the plate glass end, also helps to prevent the main board or platform from warping.

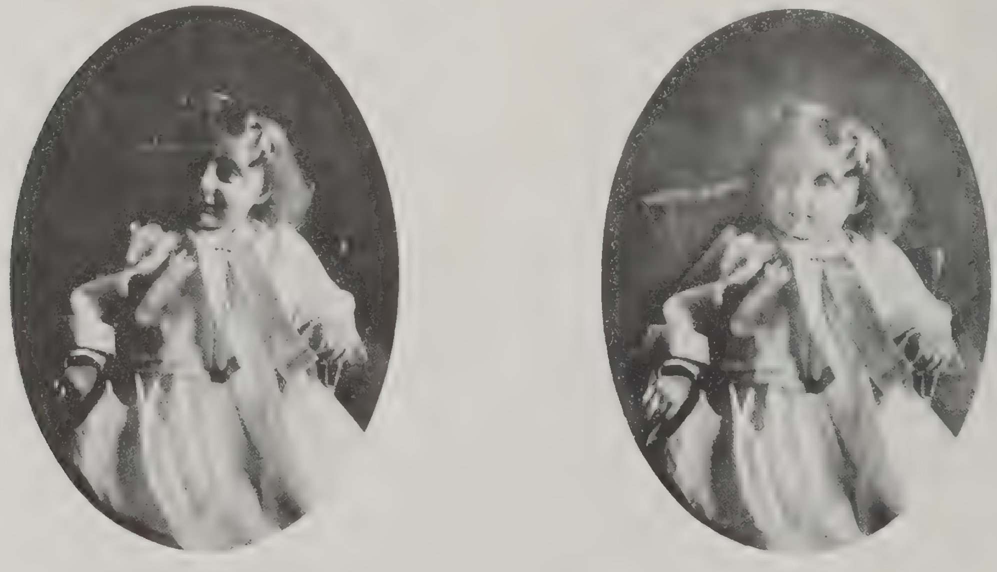
The entire cost is:

1 1-2 in. board 10 x 13 in.	.10
1 piece plate glass 6 x 8 in.	.35
1 wooden hand-vise	.10
6 screw-eyes	.03
Total cost,	.58

To use, simply place the print face up on the plate glass, then the metal cut-out form in the desired position on the print, and both under the end of vise, binding tightly first by the upper, then by the under handle.

Print and form are now held as securely as could be desired, though it is well to place one hand on the opposite side of the cut-out form to steady the entire device, and the little wheel can be used with sufficient force to nicely cut the print without the slightest fear of moving the form while doing so.

It is quite true that no one can firmly hold a form with one hand and cut with the other; so that which ordinarily would be a task, by this little device, to the amateur is made a pleasure.



Before and After Dodging.

The Outlook for 1903

BY OSBORNE I. YELLOT

"Though winter howleth at the gate,
In our hearts 'tis summer, still."

By Dr. Geo. W. Norris

THE "PHOTO SECESSION"

THE year 1902 will go down into history as a period of transition in art photography in America. The previous year saw the breaking away of a large number of prominent workers from the rank and file, and in 1902 that movement was crystallized in an organization known as the "Photo Secession." There might at one time have been an idea in the minds of those not thoroughly familiar with the facts leading up to this breach that it would be a thing of only temporary duration, to be patched up like lovers' quarrels, but if such an idea ever existed it was dissipated once and for all in the month of December, 1902, by the appearance of that superb publication, *Camera Work*, which is the acknowledged "mouthpiece" of the secession movement.

A large portion of the year 1902 was given up to waiting for this publication. There was a general feeling of suspense in the photographic world throughout the entire year, and a half-audible feeling on the part of those not in the movement that it would be unwise to move forward along any well-defined lines until it was known how far the secession movement was going. Under such circumstances it is not strange that nothing of note was accomplished during the year.

But when *Camera Work* appeared at last it brought with it such an air of absolute finality that there is no longer any reason for suspense. True, the nature of the secession movement is not set forth in so many words, but reading between the lines, and more especially when read in the light of the editor's recent article in another magazine, wherein he stated that he was not at liberty to disclose the innermost workings of the organization, it is clear that the movement is a most exclusive one, and the organization itself one which requires of the applicant for membership implied pledges which would be most repugnant to those progressive and truly independent American workers who are not already on its roll of honor. This organization, fortunately, or unfortunately, as one chooses to view it, contains on its roster the names of many of our very best American workers. The motives of its leaders are unquestionably of the highest, and the spirit which such an organization invariably engenders will no doubt result in a great deal of good work being brought forth by its members. I have heretofore said all I had to say or cared to say as to the ultimate wisdom of a movement of this kind, and would not now mention it were it not necessary to do so in order to show the conditions existing at the beginning of this year of grace, 1903.

Suffice it to say that the movement is, for the present at least, irrevocable, and that the photographic world at large may have no reason to expect in any of its enterprises the support of the "Photo Secession" or any considerable number of its members. The exhibitions having the full support of this organization as such are more than likely to be "invitation" affairs, in which the judging is done largely, if not wholly, in making up the list of the invited. Therefore it is plain to see affiliation will be impossible. It is to be hoped, however, that past experience has taught us all that there is nothing to be gained by constant bickerings one with another, and such orgies of crimination and recrimination as characterized conditions existing immediately prior to the secession. It is certainly possible for those who are not in the movement to view without ill will the successes of those who have, for what they considered good reasons, withdrawn from our midst; and it should be just as possible for them, on the other hand, to ascribe to us motives equally as good as their own, and refrain from the use of discouraging words when we fail in a moment to accomplish the things which it has taken them years to accomplish. I, for one, most sincerely hope that this attitude will be adopted by all concerned.

Therefore, as the matter now stands, it is clear that we, the American photographic world at large, must stand alone during the coming year. What we accomplish must be accomplished entirely through our own efforts.

EXHIBITIONS

The Philadelphia and Chicago exhibitions, held during the past fifteen months, have demonstrated quite clearly that there are enough of us to support exhibitions of a fairly creditable character. Without desiring to compare them with those which immediately preceded them, it has been quite clear that they were at least as creditable exhibitions as those which were held not more than five years ago, when the photographic world was undivided. That being so, there is no reason why those of the year 1903 should not be even better. Those who happen to be the promoters of these exhibitions should insist primarily upon having the best juries obtainable. That much accomplished, the juries should be made to realize that we desire that our work should be judged from the standpoint of artistic excellence alone, regardless of the result of cutting down very materially the number of frames hung. It is only by such a vigorous method of judging that we will ever come to learn what is truly artistic and what is not. If this be done consistently, at all exhibitions held throughout the coming year, I predict that artistic photography will have made giant strides before the time set for the exhibitions of 1904.

It is unfortunate that we are more than likely to miss the Philadelphia salon again in 1903. The causes which led to its discontinuance in 1902 were so varied and depended so largely upon conditions over which th photographic world in general had no control,ethat the cessation of that exhibition may well be regarded as final, — at least so far as exhibitions along the old lines are concerned. Exhibitions of that kind can only be gotten up and carried to success by the hearty cooperation of a number of men who are willing, for the good of the art, to sacrifice to a great extent their own personal feelings and desires. Unfortunately there is nowhere in the East, at the present time, an aggregation of men able and enough interested in the art to undertake a task of this kind. It is therefore extremely unlikely that the year 1903 will see a salon worthy of the name in any of the eastern cities. I hope, though, that the seed will be sown during the year which shall result in such an exhibition in 1904.

THE ST. LOUIS EXPOSITION

But unless present plans go awry, photographers will have an even greater opportunity in the St. Louis Exposition of this year. Upon the earnest solicitations of Mr. J. C. Strauss of that city, the management has finally consented to accord photography full recognition, through allowing photographs which pass the National Jury of Selection to be hung in the Art Palace, with paintings and other examples of the fine arts. It is assumed that as a matter of course the jury in this instance will be made up of eminent artists whose judgment as to the artistic worth of a picture, whether a photograph or a painting, will be generally regarded as conclusive. True, an effort is on foot to withdraw photographs from the consideration of this particular jury and allow them to be judged by prominent photographers, but it is greatly to be hoped that this movement will not be successful.

MOONLIGHT — Showing Mt. Hood, Oregon, fourteen miles distant. By H. M. PRINDLE.
Taken at 10.15 P. M. Fifteen minutes' exposure.

The editor of the *International Studio*, a well-known art publication, is ostensibly at the head of this counter-movement. But his course of reasoning is not apt to prove altogether convincing with those in charge of the exhibitions. In one of his earlier editorials on the subject, wherein he pleads for recognition of photographs, the editor says: "Or shall the photographic print, *whose sole end is to be an artistic picture*, be treated as a separate product of photography, and be assigned a position in the Fine Arts Building, under the same restrictions of having to be passed upon by an expert jury before admission as are usual in the case of oil paintings, water-colors, and black-and-white work? In a word, is it to be recognized that some photographers are artists and their prints artistic?"

Two months later, after the desired recognition had been promised, he writes: "Again, as to the National Jury of Selection: will it contain any representation of the photographers, *and, if so, of those who are identified with the best work, as shown in the various salons of this country and Europe?* Actual expert knowledge of photographic processes is of less importance than this wide acquaintance with the notable achievements . . . ."

It may, as I say, be a little difficult for the managers of the exposition to see why the judging of a photographic print "whose sole end is to be an artistic picture," should not be done by a jury of acknowledged judges of things artistic, but should be left to "those who are identified with the best photographic work, as shown in the various salons of this country and Europe," or those who have a "wide acquaintance with the notable achievements." The editor then goes on to suggest that the photographs should not be judged at all, but their selection be left "in the hands of a few photographers whose main duty would lie in judicious invitation of those prints that have already stood the scrutiny of juries of selection at the various salons." The editor of *Camera Work*, by the way, says that the position of the *International Studio* in this matter "represents thoroughly the spirit we stand for."

NEW WORKERS

The catalog of the Third Annual Chicago Salon shows the names of a large number of photographers heretofore unknown in the annals of our exhibitions, and as well the names of a few of our older and better-known workers. Reports have it that the exhibition is an improvement over those of former years, and the catalog shows that the number of prints exhibited has been held down to less than two hundred. The judging in this case was done by a jury made up largely of painters, and it is only fair to assume that the pictures which they passed were admitted on the score of their artistic worth rather than upon the dictum of a few who claim exclusive knowledge of the real worth of photographs from the artistic standpoint. All this is encouraging and only goes to prove what I have always claimed, that there are unquestionably hundreds of workers throughout the country who have in themselves all the elements of success. It only remains for each to develop his artistic instincts to the utmost, to study the pictures which have been declared to be artistic, in order not that he may copy them or follow the same lines, but that he may see therein the factors which go to make up a successful photograph from the artistic standpoint. He will learn that photography's fields are far more limited than those of painting, and will learn to save himself much loss of time and many discouragements by keeping within those limits.

A SUGGESTION

If I were writing advice, instead of a forecast, I would urge my readers to study well for one year but one thing — simplicity. Let your compositions, whether in landscape or portraiture, contain the smallest possible number of elements, and treat those few elements with the utmost simplicity. Therein lies the one great predominating feature of all the truly successful photographs ever made. Therein is the test which will be intuitively made by every jury of artists which may have to pass on your pictures during the coming year. The moment the rule is violated your photography lays bare its limitations and proclaims itself a handicraft and not an art.

Looking forward into the year now fairly upon us I can see much of encouragement and discouragement. We have done but little in the past, — we can hope to do but little in one short year. But I think I can see ahead of us a gradually dawning era of artistic improvement in the rank and file of the army of serious workers. While it is too much to hope that any of our number may accomplish anything truly great in this one year, it is not too much to hope that we all may come to its end with a higher and truer idea of the possibilities of our art, and with a more perfect conception of the difficulties which beset our path. If we shall succeed in doing only this we shall have laid the foundation for greater things in the years to come.

Foreign Abstracts

Action of Hydrogen Peroxide on the Film

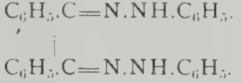
About ten years ago Le Roy showed that a strongly alkaline solution of hydrogen peroxide could be used as a developer; that it acts as a reducer in acid solution was shown by Andresen, in 1899; and Russell has recently shown that a very small amount of peroxide vapor will fog a plate. Dr. Luppo-Cramer now finds that although a trace of peroxide, either in liquid form (solutions from 0.03 to 0.1 per cent) or as vapor, will fog the plate or bring it to the zero state, according to the strength, a stronger solution, as three per cent, will remove the fog and cause a complete reversal of the picture, a chemical solarization. He considers that the effect is dependent upon the gelatin, as collodion plates are not similarly affected. He thinks that the chemical connection between the gelatin and the silver bromide is ruptured by the hydrogen peroxide, and the silver bromide thus rendered capable of easy reduction. (Phot. Corresp., 1902: 563).

Analysis of Dry Plates

A simple and thoroughly proved method for the determination of the silver bromide content of a photographic dry plate is detailed by Bellach as follows: The film is treated in a porcelain dish at the ordinary temperature for about fifteen minutes with a 1 : 20 solution of potassium cyanide, until the last traces of silver bromide have gone into solution. The solution is poured into a beaker, the dish well washed into it, the whole solution warmed and decomposed with concentrated nitric acid, whereby hydrocyanic acid is evolved, and silver bromide reprecipitated in a very dense form which is easily washed and filtered. This operation must be performed in a strong draught, on account of the highly poisonous nature of the acid fumes. The precipitate is to be washed by decantation and filtered on a weighed filter, washed several times by decantation, dried at 115 degrees and weighed. If electrolytic appliances are at hand, it is naturally simpler to electrolyze the silver potassium cyanide in the usual manner. The E. M. F. should be 3.7–4.1 v., the current density 0.2–0.5 A. per 100 qcm. (Allg. Phot. Qtg., 1902, 9: 165).

New Investigations on Phototropy

Biltz has found that some derivatives of benzilosazone, a body with the formula



$$\begin{array}{l} C_6H_5.C{=}N.NH.C_6H_5. \\ \quad\; | \\ C_6H_5.C{=}N.NH.C_6H_5. \end{array}$$

are distinctly phototropic, that is, possess the property of changing color in the light and of recovering the original color in the dark or more quickly by warming to 80 degrees C., and that the same property is possessed by cuminil-beta-osazone, both anisilosazones and both piperilosazones, while others, such as the stereoisomeric benzilosazone, both salicilosazones and both vanillilosazones do not possess this property. More recently the author with Amme has made a further series of osazones and tested their light sensitiveness. These all contain two hydroxyl groups, one in each benzol ring in para-position to the carbon atom bound to the ring, and in addition one or two halogen atoms or a nitro-group in ortho-position to this hydroxyl group. The substances made were the two tetrabromdioxybenzilosazones, the two tetraioddioxybenzilosazones, dibromdioxybenzilosazone and dinitrodioxybenzilosazone. All these bodies proved to be completely stable to light. Therefore it may be concluded that the presence of a hydroxyl group in a body prevents it from being phototropic. The substances earlier investigated by the author which show no phototropy contain hydroxyl, while the phototropic benzilosazone derivatives and the related phototropic benzaldehydephenylhydrazone are free from hydroxyl. Also Marckwald's examples of phototropy, chinochinolinchlorhydrate and beta-tetrachloralphaketonaphthaline, have no hydroxyl in the molecule. (Eder's Jahrbuch, 1902, 16: 3).

Permanence of Prints from Single Bath

Lumieres and Seyewetz have made thorough investigations as to the cause of change of chlorcitrate silver prints which have been toned in the single bath. They arrive at the following conclusions: 1. The principal cause is the presence in the prints of hypo, owing to imperfect washing, but the pictures change only in the presence of moisture; 2. the change takes place in pictures toned with gold, when hypo is present, even if the toning has been done in a neutral solution; 3. the presence of a trace of hypo imperils the permanence of a print, even though it contains no gold, whether the image consists of silver sulphide, of silver alone, or of silver and lead. The yellow color of the bleached prints appears not to depend on the presence of lead sulphide, but probably to be caused by finely divided sulphur, coming from the decomposition of the hypo. The authors therefore think that the oft-repeated accusations made against the combined bath are without foundation, as their investigations have shown that prints toned and fixed in separate baths are as unstable as those made in the combined bath if they are improperly washed, and then exposed to moist air. The safe way to assure the permanence of silver prints is to completely remove the last traces of hypo. (Bull. soc. franc. phot., 1902 (2) 18: 409).

Camera Work (A Review)

BY ARTHUR HEWITT

SUMPTUOUS and very refined in its entirety, the first number of *Camera Work* has been recently published by Mr. Alfred Stieglitz, of New York.

The illustrations, mostly photogravures on India paper, chiefly reproduce the work of Mrs. Gertrude Kasebier. Few of them, however, appear for the first time.

A. Radcliffe Dugmore has been permitted to show one of his charming bird-pictures, while Mr. Stieglitz takes advantage of an every-day scene on the railroad tracks, rendered murkily atmospheric by the recent soft-coal nuisance. In the center of the picture a moving locomotive is belching out its opaque fumes.

The literary features start with a clever effusion on Mrs. Kasebier's personality, work, etc., by Mr. Charles H. Caffin. This is seconded by another effusion on the same lady by Miss Frances Benjamin Johnston, some other minor articles, and then a whole lot of wearisome cross-correspondence about "Pictorial Photography" and the St. Louis Exposition, the gist of which is evidently intended to reveal the fact that the editors and their chosen few intend to boycott, in 1904, the Fine Arts Gallery at St. Louis, offered as it will be to photographers generally: and why? Because, as I see it, Mr. Alfred Stieglitz, for instance, is not on the National Jury of Selection. Fie, fie, Photo-Secessionists!

I must wander for a moment and quote from the first pamphlet recently issued by this body:

> The discipline of the organization shall be in the hands of the Council.
>
> In order that the Photo-Secession may exercise a potent influence upon the welfare of pictorial photography each member will be duly advised by the Council of the attitude which the Photo-Secession will assume toward any important exhibition, and whether it is deemed desirable that the members of the Photo-Secession shall exhibit as a body, or individually.

And so it is that I, loving as I do much of the work attributed to the Secessionists, cannot help feeling that they again, through their organ, *Camera Work*, throw down the gauntlet to those outside their pale, and that gauntlet has for its plates of steel the wretched methods and connivances of a mercantile trust; and I, for one, although outside my duty as a reviewer, challenge the right of the Photo-Secessionists as a body to be the sole gatherers of American representative photographs for any important art exhibition.

However, let me suggest that when it is with photographers, as Sidney Lanier writes (and Jos. T. Keiley quotes in his contribution to *Camera Work*):

> The experience of artists in all ages is reported by history to be of precisely the same direction. That principle is that the artist shall put forth, humbly and lovingly, and without bitterness against opposition, the very best and highest that is within him, utterly regardless of contemporary criticism.

Then truly will the millenium have dawned for American Photography.

Notes and News

FIRST MINNEAPOLIS PHOTOGRAPHIC SALON

MINNEAPOLIS, MINN. The Minneapolis Society of Fine Arts, in cooperation with the Minneapolis Camera Club, announces that the first Minneapolis Photographic Salon will be held in the art gallery of the Public Library Building, in the city of Minneapolis, Minn., from Jan. 17 to Jan. 28, 1903.

Exhibitors at the Chicago Salon, closing about Jan. 4, are invited to send their work to the Minneapolis Salon, and, together with local and other exhibits, a most successful salon is anticipated.

The Jury of Selection will consist of Mr. Robert Koehler and Mr. Alexis J. Fournier, of the Society of Fine Arts, and Mr. H. E. Murdock, president of the Camera Club.

No charge will be made to exhibitors and no awards are offered, but the acceptance of work by the Jury of Selection will be an honor of no small degree when its personnel is considered.

A pamphlet containing full particulars and rules for exhibitors, together with entry blanks, may be had by addressing Mr. C. F. Potter, Jr., 13 South Seventh street, Minneapolis, Minn., of the committee on publicity.

BOSTON, MASS. A private exhibition of portraits, by leaders in the new school of photography, was held by F. Holland Day, in his studio, Boston, Dec. 4 to 7 inclusive.

The collection included examples of portraiture by the most eminent photographic workers, both of this country and abroad, and was shown by Mr. Day in support of the theory that the artist's individuality may be as strongly expressed through the medium of the camera as through that of brush or pencil.

Fifty-four examples were shown of portraits of Mr. Day by the following artists: J. Craig Annan, of Glasgow; Mohund Ben Ali, of Algiers; F. W. Birchall, of Boston; Will Cadby, of London; Alvin Langdon Coburn, of Boston; Charles G. Cox, of New York; Reginald Craigie, of London; Robert Demachy, of Paris; Mary Devens, of Cambridge; Frank Eugene, of New York; Frederick H. Evans, of London; George H. Hastings, of Boston; J. J.

Hawes, of Boston; Frederick Hollyer, of London; Gertrude Kasebier, of New York; J. A. Laurenz, of Boston; C. J. Rogers, of New York; Eva L. Watson, of Philadelphia; Edward J. Steichen, of New York; Waleray, of Paris, and Clarence H. White, of Newark, O.

With scarce a single exception, the pictures showed strongly marked characteristics as expressing each artist's thought. Each picture was distinct and separate, expressing a remarkable range of tone and treatment, and demonstrating that individuality showed itself in the work of the artist.

ILLUSTRATION FROM "THE NEW PEIRCE PORTFOLIO."
Copyright, 1902, by Robert Howard Russell.

"The New Peirce Portfolio," by Thomas Mitchell Peirce. Seven beautiful compositions, showing the American girl at outdoor pastimes and in conventional studies. Pictures o the Tennis Girl, the Golf Girl, the Ping-Pong Girl, etc. These drawings are among the finest that Mr. Peirce has done, and they may truly be said to mark an advance in his art. Published by R. H. Russell, New York.

"The ABC of Photo-Micrography," by W. H. Walmsley, is a practical guide for beginners. Mr. Walmsley is well known as one of the most expert of the workers in this fascinating field. He has written this little book to explain — as simply as possible — the elementary principles and practice of photo-micrography. While written for beginners, it contains much information useful to more advanced workers, and is profusely illustrated with fine half-tone engravings from photo-micrographs by the author. Tennant and Ward, New York.

ROCHESTER, N. Y. The Bausch & Lomb Optical Company, Rochester, N. Y., advise us that their action in advancing the date of closing their Quarter Century Photographic Competition to October 3, 1903, has met with very general approval. A number of the foremost photographers of the country have signified their intention of entering the $3000 competition, and the special award of $300 as a grand prize for the photograph showing the best lens work of any submitted in the competition, is attracting a good deal of attention among photographers who seek to know the lens and its possibilities.

The Seneca Camera Company, of Rochester, announces a new management both as regards office and factory, for the year 1903. M. E. Graham, president; J. B. Hamilton, vice-president; and W. T. Crouch, treasurer, are the officers of the new company, and they have ready an entirely new line of photographic goods which are guaranteed first-class in every respect.

BROOKLYN, N. Y. According to a prospectus recently sent out by the Brooklyn Academy of Photography, it fills a valuable part in the photographic life of that city. Every month they have a print show. One month it is composed of developing papers, another month of blue-prints, and then follow, in succession, carbons, platinotypes, gum bichromates, etc. Members have the opportunity of seeing what the others are doing, and of making comparisons with their own work. On the third Monday of every month there is a lantern show, at which lantern slides, made by the members, are tested and criticized, if they so desire. At frequent intervals a demonstration is given, by a professional or an experienced amateur, of some paper, chemical, or apparatus, which is of interest to all, and at the end of the season medals are awarded for superior work in lantern slides and prints.

Should the ambitious amateur at any time have knotty questions which he cannot solve, he will always find the "latch string" hanging out on Monday nights, and if he will make his troubles known to any of the members in attendance they will be glad to give him the benefit of their experience.

BOSTON, MASS. The Lens and Brush Club has arranged a program, for the winter, of exceptional interest to photographers of Boston and vicinity. On the second Friday of each month some prominent artist will address this club and give a criticism of pictures.

There will be, in addition, a class under the auspices of the club, which will be conducted by an artist of recognized standing. The first six evenings will probably be given to lectures in posing, by Mr. E. W. D. Hamilton of the State Normal Art School, whose talks on posing and lighting, illustrated by a model, at the club a short time ago, were much enjoyed by the members.

The following classes will be conducted by such men as E. L. Major, H. D. Murphy, and Cyrus E. Dallin, and are open to all, whether members of the club or not. An admission of seventy-five cents per evening will be charged.

A new feature of the club meetings will be a series of "Ladies' Nights," when any lady interested in photography will be invited to attend. The classes will also be open to ladies.

PHILADELPHIA, PA. The Photographic Society of Philadelphia has decided to purchase a home of its own. The new location will be within three squares of City Hall, but exact information is withheld. The committee reported that desirable quarters had been found and that an expenditure of from $25,000 to $27,000 was required. The society authorized the purchase of the property and the creation of a first mortgage for half the amount with a second mortgage for the remainder to be taken by members. Subscriptions of over $5,000 from members, on the second mortgage, were reported. The society has also approved an increase in annual dues from $10 to $15 and of life membership from $100 to $150.

BALTIMORE, MD. The Photographic Club of Baltimore opened an exhibition in that city from Dec. 9 to 13, inclusive. The exhibition was the result of the prize-print contest last spring, and pictures were received from Illinois, New York, Pennsylvania, Washington, and elsewhere.

The judging was done by Mr. Theodore Marburg, president of the Municipal Art Society; Mr. Charles E. Fairman, president of the Capital Camera Club of Washington; and Mr. Frank V. Chambers, editor of the "Camera," Philadelphia.

The Crucible

Preservation of Alkali Solutions When an alkaline solution which has stood in a soft glass bottle for a long time is again to be used it is often found that it has attacked the glass and that as a result it contains a quantity of gelatinous, flocculent, or scaly precipitate. The photographer who is not a professional chemist is often puzzled by this appearance, and generally throws the solution away, fearing to use it. This is not at all necessary. The solution is as good for all photographic purposes as it ever was. The precipitate is silica or a silicate and is absolutely inert chemically. If the quantity is considerable it may be filtered out, but this is not necessary, and when the solution is one of caustic soda or potash, or ammonia, it is not advisable, as these solutions deteriorate rapidly by filtering, owing to the absorption of carbonic acid in one case, and the evaporation of ammonia in the other. This etching of the glass, which occurs most readily with soft glass bottles, is a considerable source of trouble to the analytical chemist, who finds that his standard solutions of alkalies gain in strength by thus attacking the bottles, and so have to be frequently restandardized. The new Jena glasses resist chemical action much better than the older kinds, and are now almost exclusively used for chemical vessels, as well as for lenses. In both cases, unfortunately, the price is much higher, but the advantages are so great that we willingly pay it in both cases.

Rapid Drying of Negatives It is often necessary to rapidly dry a negative in order to get a print in a hurry, and with certain very soft gelatins, the past summer, I found that I invariably got bacterial growths unless I dried very rapidly. The old practice in this respect is to use alcohol, and the best process is to flow the plate in a flat dish with enough absolute alcohol, or at any rate ninety-six per cent, to cover well. Flow the alcohol back and forth for two or three minutes, then pour it into a bottle. Repeat this two or three times, then stand the negative aside, and it will be dry in ten minutes or less. I have not found that a final treatment with ether, which is often given in drying chemical substances, is of any advantage, as it does not seem to penetrate the film well. As the alcohol is expensive, it should be carefully saved and used again. With many plates to dry, a considerable expense is otherwise incurred. As the alcohol takes up water it naturally loses its drying power, and the water must be extracted, so that it can be used again. The way to do this is as follows: Get from a mason a large lump of quicklime. Slack lime is worthless for this purpose. Get a large lump from the middle of a freshly opened barrel and remove all the soft, powdery, air-slacked lime from the outside. The quicklime will be darker in color and hard. Break up the lump into small pieces with a hammer, taking care not to get any particles into your eyes, and put them in a wide-mouthed bottle. Pour your diluted alcohol upon the lime and cork well. Shake occasionally, and in a couple of days the alcohol will again be water-free, if you have used lime enough. The alcohol should now properly be distilled, but for our purpose it may simply be filtered into another bottle and tightly corked.

Personally I now prefer to harden my plates with formaldehyde. If I possibly can, I wash before this operation, as hardened plates demand five or six hours' washing for complete elimination of hypo. The hardening, whether done before or after washing, is accomplished by five minutes' immersion in a five per cent solution of commercial formaldehyde, which is or should be a forty per cent solution of the gas. After this treatment the plates may be dried at any practicable temperature without danger. I have often laid them face up on the top of the kitchen range and dried them in five minutes; and at other times I have held them two inches above a gas flame until the steam poured out in clouds and the glass became too hot to touch, without injuring the negatives in the slightest. On one occasion, for experiment, I heated a plate in the gas flame until it cracked from the heat, and the gelatin burned at the edges, without melting or distorting the negative in the slightest; and a negative with one end dried thus, and the other half slowly, showed no drying marks.

Two Strange Causes for Pinholes During the past summer I found while using a number of different makes of plates, that one or two were coated with emulsions made of very soft gelatin. These held water with great obstinency and in damp weather were often twenty-four hours in drying. The result was that they invariably contained round holes, sometimes a millimeter in diameter. As these often appeared on negatives which were perfect when the washing was complete, an investigation was made. It was found, by examining a batch of slowly drying plates at intervals, that these holes appeared within a short time and gradually grew larger until the plates were well advanced in drying. The fact that gelatin is one of the recognized culture-media for bacteria, and that many species liquefy, it indicates that these plates were infected with one of the liquefying species, which continued to grow and destroy the gelatin as long as the conditions of moisture and warmth were favorable, and then perished. The liquefied gelatin shrank to the edges on drying and thus left circular patches of bare glass. These soft plates were thereafter dried by the use of formalin and this trouble ceased.

About the beginning of August plates of another make, of very hard and quick-drying gelatin, which it had not been deemed necessary to harden, also began to show holes. It would not be fair to call these pinholes for they were of irregular shapes and sometimes more than an eighth of an inch long. There were not many of these; usually one or more would be found on one or two plates in a batch and the rest would be free. After this had happened several times, one evening I rested a wet plate on two nails set in the wall near a gas jet, where it was expected to dry in an hour or two. Happening to look at it ten minutes later a fly was seen sitting on it. Fearing that it would get caught in the gelatin I frightened it away and the mystery was solved. The fly had been eating the moist gelatin and had left a hole of the shape that had been puzzling me. Banishing the flies from my drying-room I had no more trouble of that kind.

A WINDING ROADWAY.

Taken Aug. 20, about 1.30 P. M., in good light, with 1-100 second exposure. Stop F.-8, with Eastman Film, on W. D. Platinum paper. No filter was used.

Open Criticism

> "If you would be pungent, be brief; for it is with thoughts as with sunbeams — the more they are condensed, the deeper they burn." — *Southey.*

We print herewith four open criticisms on "The Defender" picture published in our December issue, and we print them in the order of their respective merits as we see them. With the increased size of page, we are able to give more space in this issue to this department, which has now become of much interest to our readers.

No. 1. — A very poor photograph of an interesting subject. This negative fails to give the least idea of the old "Defender," because of the badly chosen viewpoint. None of the graceful lines of the yacht have been reproduced, and there is nothing to even suggest their beauty. Aside from this, the negative lacks strength, the spars and rigging being especially bad. The background, though slightly out of focus, would be good were it not for the ugly nose of the yacht.

D. D. Cook,
Newark, N. J.

No. 2. — A photograph of any craft which fails to show its lines and rig is not a complete success. In this respect the photograph is a failure.

In composition, the upper lines lead the eye into the water at the end of the wharf where there is — nothing. The lower lines and that formed by the mast lead the eye to its foot, where it runs right and left to scan the lines of a shapely hull, and is again disappointed. All the good I can see about the picture is in the technique, which is very fair.

J. S. Henry,
Hopedale, Mass.

No. 3. — The view of this boat is incomplete, as it shows but a little more than half of the boat, and the lighting would have been better if the sun had been more behind the camera, so the shadows would be slightly beyond the boat and under it.

Placing the camera farther back, so as to include the whole boat, with the sun a little more behind the camera, and using a smaller opening, and longer exposure to give more detail, would have improved the picture. It would have looked more natural, resting in the water.

W. C. Webster,
Jaquins, N. Y.

No. 4. — The picture shows the "Defender" in a poor light. The wharf is not a good background. The bow only is not a picture of the "Defender."

To remedy, photo the other (port) side of the boat; use the length of the plate horizontal, and place the camera at a distance to take in a little more than the entire boat; if possible, secure sky and water only for the background.

H. Fleischmann,
Philadelphia.

We give another picture in this issue. Use a postal card and limit yourself to one hundred words. The prize award is one year's subscription to the Photo Era.

The Round Robin Guild

Conducted by Elizabeth Flint Wade

(Any amateur photographer may belong by sending in his name and address)

PHOTOGRAPHIC ATROCITIES

"Oh, Liberty!" cried Madame Roland, "How many crimes are committed in thy name!"

We might apostrophize this famous speech and say, "Oh, Photography! how many atrocities are committed in thy name!"

These "atrocities" appear not only in the daily press, — with its coarse screen reproductions produced with haste, printed on flimsy paper and called illustrations — but they finid their way into the pages of some of our leading illustrated periodicals. In the paper that depends on the camera for its pictures these atrocious things appear with every issue. Evidently the artist who made the photograph, the editor of the paper, and the head of the "art" department believe that anything produced by a camera is worthy of reproduction and of being dignified by the name of picture. We talk about the camera being an educator. That is a truth; but it is also a betrayer of the person behind it, making it very cognizant that the producer of such pictures as these "atrocities" is entirely devoid of any knowledge of even the first principles of art. To say nothing of anything else, the lighting is everything that is bad, and the composition everything that is worse than bad.

Then, too, the anachronisms which are perpetrated in so-called "studies" are so ludicrous that one wonders how they ever passed the portals of the editor's office door, much less found their way to the "art department" of the paper. We see the subject not only on the "wrong side of the cow" but on the wrong side of everything. Before me lies a fearful example of this sort of work. It is in a recent number of a leading illustrated paper. It purports to be the picture of a girl spinning on an old-fashioned wool-wheel. Now a wool-wheel is so much a thing of the past it is no wonder that the young women of the present generation should not know how to use it, but it is a wonder that being ignorant they should be so willing to betray their ignorance as to portray it in the camera.

Now any one who knows anything about spinning wool rolls by hand on the old time wheel, knows that on the head of the wheel is placed a bundle of the white, fluffy things, laid lightly together, ready to the hand of the spinner; that the band of the wheel crosses at the top where it encircles the smaller wheel at the head; that the wheel must be so placed that the spinner may have room to walk back and forth to draw out and wind up her thread, and from the hand of the spinner depends the part of the roll that is still unspun, while from between the thumb and forefinger runs the newly spun thread to the spindle, held taut and firm. So much for the correct accessories of the picture, and now for a description of this picture which was supposed to be a Puritan maiden busy at her wheel.

The wheel itself was drawn close to a mantel from which hung a "drape," a thing with which our foremothers were too sensible ever to disfigure their homes. The girl stood between the wheel and the mantelpiece, the rim of the wheel coming against the mantel in such a way that the spinner was imprisoned in a cul-de-sac. The wheel-head, which is detachable, was put in so that it canted over toward the big wheel in a way that no well-bred wheel-head, ready for business, would think of doing. One hand of the spinner was holding the "rim" of the wheel as if setting it in motion in that way, while from the other depended loops of string, much as if she had gathered up a wrapping string, one end of which was fastened to the spindle. As for rolls, there was not even the hint of any material to serve as an excuse for the loops of string; and as for the Puritan costume, it was as far away from everything as the wheel.

And yet the editor called attention to this special picture as a fine example of the way in which our Colonial Dames occupied their time.

Shades of our foremothers! Let us hope their sight is holden so that they see not the things of this earth, especially our photographic atrocities.

Let us say no more, but let us make a New Year resolve to refrain from committing any more atrocities such as these, and as far as lies in our power to restain our photographic friends from the same misdemeanors.

We almost need a photographic Anthony Comstock.

ORGANIZING A CAMERA CLUB

In the November number of the PHOTO ERA a notice was printed to the effect that suggestions on organizing and conducting a Camera Club would be given in the December number. Instead of fulfilling this promise, the space of this department was largely devoted to hints on Holiday gift-making, using the camera as a right-hand helper. As a consequence, those readers who had looked forward to the promised article were disappointed, and many letters, asking for the article which failed to materialize, were sent to the editor directly after the issue of the December copy. It is hoped that the suggestions have not come too late for the use of those who desired such an article.

According to Matthew Arnold's idea of the Americans, three are quite sufficient to form an organization, for he says that whenever three Americans get together they organize. This is partly true, for three people interested in one subject are quite enough for a nucleus round which shall gather as large a number of individuals as are interested in the same subject that the special location may furnish.

There is, doubtless, no subject of wider interest, or more enthusiastically followed, than that of amateur photography, so in the case of the three amateurs desiring to organize, they will immediately find many followers. The thing is to begin. A list is first made of the amateurs living in the vicinity, and a notice sent to each, to the effect that all amateurs interested in forming a Camera Club are invited to meet — at some place designated, and on some special evening — for this purpose. The invitation is, of course, signed by the originator, or originators of the plan.

At the meeting a chairman pro tem is appointed who states the object and proceeds to take the voice of the meeting. If enough are in favor of the plan — and you know three are enough to organize — then either the officers or a board of directors are immediately elected. It is customary to have a board of directors, and the officers are elected from the members of the board. In any board a certain number retire each year, and a corresponding number is elected to fill the vacancy. It is customary for a third of the board to retire annually, and in a new organization those who are to retire in one, two, and three years respectively, are selected by lot. For instance, if a board has nine directors, the names are written on slips of paper and dropped into the ballot-box. They are then drawn out, one at a time, the first three drawn serving for one year; the second three, two years; and the remaining three, for three years.

The newly elected board retires, and elects from its numbers a president, vice-president, secretary, and treasurer. The dues are next decided; then time and place of meeting; a constitution and by-laws drawn up, or a committee appointed to construct one; a committee on program, and one on rooms, appointed, and the first business of organization is begun.

The constitution is, of course, arranged to meet the requirements of a simple organization, and for that reason should be made as short and concise as possible. Any form of club constitution may be used as a model. The articles of a simple constitution may be limited to five: Name; Object; Officers; Membership; and Amendments. The by-laws would come under the article: Meetings; Duties of Officers; Membership Dues; Application and Election; Committees; Order of Business; and Amendments. Under these heads are constructed the rules and regulations of the club. It is better to conduct the meetings for two or three months before putting the constitution into print, as if there are alterations or amendments they will present themselves during the first meetings.

Unless the organization is a large one, and the dues warrant it, it is wiser to begin by meeting at the home of one of the members. Usually a club can meet in this way for one season, but where practicable, it is, of course, better to have a club-room, and such a room may usually be found at a nominal price.

While a Camera Club is an organization out of which one gets a great deal of amusement, its first object is the advancement of its members in the art of photography. The meetings will therefore be arranged with this end in view, and it will be the duty of the committee on programs to provide object-lessons in all departments of photographic work. There is the inexhaustible one of development. We used to be instructed to stick to one developer until it was mastered. This is, of course, a good plan for the beginner who has yet to learn the chemical effects of the different ingredients which compose his developer, but if one wants variety in his negatives he must learn to use a developer that will produce the effect aimed at. One of the best object-lessons in this line is to have one of the members skilled in the uses of different developers make several negatives of the same scene or object on the same plate and with the same time of exposure. Then for a demonstration use a different developer for each plate, producing in one negative a sharp contrast, in another a soft negative with delicate detail, in another a crisp negative with high lights not too strong, and with no muddy shadows, etc, etc. The next object-lesson would be the printing from these same negatives, showing which paper to use, and how to manipulate it to get the best effects.

Another fine object-lesson is on the point of view. This may be demonstrated by a number of the club photographing the same scene or the same object from different points of view. When the negatives are finished and the prints made the artist member of the club may be invited to give a critical talk on the merits of the different pictures, not omitting to point out their defects.

As soon as possible a club should become the possessor of a lantern. The lantern-slide is a most striking object-lesson when demonstrating the merits and demerits of a picture.

One thing which the demonstrator should bear in mind is, that what looks so easy when he manipulates the plates and papers is a difficult task to the tyro. It is, therefore, a wise plan to let as much of the work as possible be done by the members, for an ounce of experimental knowledge is often worth several pounds of theoretical knowledge.

One thing which the members of a Camera Club should remember is, that there is an art side to photography, and not be so intent on the technical part of the works as to lose sight of the artistic side. As examples of study in portrait work the club could buy photographs of the works of great painters, and for suggestions in composition the photographs of landscapes done by masters in landscape painting.

In the early numbers of the PHOTO ERA will be found a series of articles on great painters and their methods, which would be of great service to the members of a Camera Club. These articles could be separated from the magazine and bound together in convenient form.

In the PHOTO ERA for November, 1899, will be found a short article on how to form a Camera Club, which will form a valuable supplement to the suggestions here given.

Any questions on individual points will be gladly answered by the editor of the Round Robin Guild. If an answer is desired by mail, enclose stamp for return postage and letter will be sent by return mail.

No place is so small but what there will be found amateurs enough to form a club, and in choosing a name for the club, no matter how small, it is better to call the club by the name of its town, as this not only saves trouble in corresponding but makes the club one of the institutions of the place.

PREPARING PHOTOGRAPHIC GOLD

Several correspondents are anxious to know how to prepare gold for photographic use. Where one prepares his own gold there is a saving of quite half the expense, and if one uses any quantity of this precious metal it is economy to do this instead of buying it ready prepared.

Gold is used in photography in the form of chloride of gold. To make this chloride, pure gold is dissolved in a solution called "aqua regia," the only known solvent of gold. The solution is made by mixing together in the proportions of one part nitric acid, one part hydrochloric (muriatic) acid, and three parts of water. The gold to be dissolved is first weighed, then put in a glass vessel, and over the gold is poured eight times its weight of aqua regia. The glass vessel is set in a dish containing hot water and placed on the back of the stove until the gold is entirely dissolved. The solution is then poured into a porcelain crucible and subjected to heat until all the free acid has evaporated. After the acid is evaporated, a little distilled water is turned over the gold and then evaporated, and to every grain of gold chloride is added three drachms of distilled water.

Chloride of gold and sodium is prepared by dissolving chloride of sodium (common salt) in a solution of chloride of gold and then evaporating the liquid. The chemical formula for chloride of gold and sodium is $NaCl,AuCl_3+2H_2O$.

Gold coins and gold jewelry always contain more or less alloy. Gold coins contain so little alloy that it is not necessary to separate it from the gold; but in cases where one uses jewelry, the gold must be separated from the dross. To do this, first dissolve the gold in the aqua regia according to directions given, then dilute the chloride with distilled water, and add a small quantity of ferrous sulphate. The sulphate causes the gold to be precipitated, and it settles to the bottom of the vessel in the form of a brown powder, while the alloy is held in solution. When the gold has all settled to the bottom, which will take some little time, turn off the liquid carefully, wash the gold in distilled water and redissolve the gold in fresh aqua regia.

Gold-leaf, such as is used by dentists, is a desirable form for preparing gold chloride, and if one has a friend among the dentists one can get a small quantity at a time.

In using the two acids which make the aqua regia be very careful not to get any on the skin, as the burn is very painful. If one is so unfortunate as to burn himself with acid do not put water on the burn but cover it immediately with oil or grease. This stops the action of the acid on the skin. Lime water and sweet oil is a very desirable preparation to have where one is working with caustic chemicals. It will allay the pain and arrest the action of the chemical almost immediately.

LANTERN-SLIDES BY CONTACT PRINTING

Contact printed lantern-slides are the easiest slides to make. The lantern-slide plate is placed on the negative, film to film, and the exposure made to gas or lamplight in the same way as one makes a transparency or a bromide print. When printed, the slide is developed in the same way as a negative, using a developer which works slowly and evenly, and one which will bring out detail well.

To make a good slide the negative must be free from spots and scratches, have fine detail in the shadows, and there should be no harsh contrasts between the lights and shadows. Every imperfection is magnified many times when the picture is thrown on the screen, so special care is required in their preparation. The developer must be fresh, the hypo must be clean, and when the plates are drying they must be set in a place free from dust.

To one who has never attempted lantern-slides those made by contact printing are the best for first experiments. Almost every negative is improved by trimming, and in a large negative there are often parts that make an excellent subject for a lantern slide. If one uses a small film camera, and has some good film negatives, they are the ideal negatives for contact lantern slides. In printing lantern-slides it is a good plan to use a mat to block out all the parts not to be included in the picture. Mats may be had of different sizes and shapes, but the most satisfactory are the squares and oblongs.

The winter months are just the time for making and showing slides, and even with a small lantern one may arrange very pleasant evening entertainments for his friends.

ANSWERS TO CORRESPONDENTS

Ben. H. — By "toned vignettes" is meant a picture which has been vignetted, and then, before toning, the white ground around the picture has been flashed in the light just enough to give it a tone off the pure white. This makes a more pleasing print than when the paper is left a clear white.

Bertha Follen. — The fog which you describe as covering your negative is doubtless a chemical fog. It can sometimes be removed by taking equal parts of glycerin and water and adding to the mixture an equal quantity of a saturated solution of hyposulphite of soda. Let the negative remain in the solution until cleared. It sometimes takes three or four hours to clear the plate.

F. F. D. — No; one does not need to be a subscriber to become a member of the Round Robin Guild. Send in your name and address and a membership ticket, admitting you to all privileges of the Guild, will be sent you. The print which you enclose shows that you have a good idea of the art side of photography. The landscape is an exceptionally fine bit of artistic work

Carlos M. — Yes; aristo paper may be developed, metol being one of the best agents for that purpose. Print until a faint image appears, then develop in a one solution metol developer. One gets very fine effects in such prints, and in these cloudy days, when sunshine is at a premium, it hastens the work of printing very materially.

F. C. Lane. — To make a paper negative use very fine paper, either the thin velox or very thin platinum. Make as good a print as possible on this paper from the paper print. Wash and dry, then wax the paper with pure white wax, either melting and submerging the print in it, then draining and removing the superfluous wax by ironing the print between two sheets of photographic blotting paper, or lay the print face down on a clean sheet of paper and apply the wax to the back of the print by means of a warm iron and a stick of white wax.

A. T. Hudelson. — Circulars in regard to the Round Robin Guild are being prepared and will be sent to all members early in January. Am glad you are so interested in the department and trust to see some of your work in the Guild contests.

Eleanor Barnes. — If you have good negatives of unusual places you can dispose of them to dealers in lantern-slides. From your description and without seeing any of your prints I should infer that you had many pictures of unusual merit and value.

Dora Estes. — A formula for eikonogen developer suitable for developing bromide prints is made as follows: Solution No. 1. Sulphite of soda, one and one half ounces; hot water, twenty-two ounces; eikonogen, one half ounce. Dissolve the sulphite of soda in the hot water, then add the eikonogen. Solution No. 2. Sal soda, four ounces; water, fifteen ounces. To develop take three ounces of No. 1 and one ounce of No. 2.

Katherine L. — You will find in the July number of the Photo Era directions for making blue transparencies from spoiled plates. If you are not successful write to the editor and explain wherein you failed and further directions will be sent you.

HISTORICAL GUILD

Members living in Philadelphia who are interested in assisting making a pictorial collection of historical places in the city and vicinity, will please send all prints to Maurice T. Fleisher, 2223 Green St., Philadelphia, Pa., and he will take charge of them and see that they are properly classified and cared for. Send with each picture a full description. Send unmounted platinum prints and number them on the back. Let the description be numbered to correspond, and typewritten on a piece of paper suitable for pasting in the book with the print.

MOSS ROSEBUDS. By Marion S. Gaines.

PHOTO ERA

The American Journal of Photography

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Change of Price Attention is called to the fact that the allotted time for securing the Photo Era for the ensuing year, at the merely nominal rate of one dollar and a half, will soon expire. Those who have not already availed themselves of this liberal offer are advised to "take time by the forelock" and send in their subscriptions promptly. After January 31, the subscription price will be raised to two dollars and a half, and it will be decidedly cheap at that. We propose to publish the handsomest magazine issued in the photographic and printing world but we want all our readers to take advantage of the old subscription rate while it lasts.

The New Photo Era The famous tailor of Tooley street was outdone by an enterprising American who went over to England and opened a shop in Birmingham, recently. Here is the story, as we find it in a British exchange:

He obtained premises next door to a man who also kept a shop of the same description, but was not very pushing in his business methods, preferring to jog along in the old, conservative way.

The methods of the American, however, caused the older trader to wake up, and, with the spirit of originality strong upon him, he affixed a notice over his shop with the words, "Established Fifty Years" painted in large letters.

Next day the American replied to this with a notice over his store to the following effect: "Established Yesterday, No Old Stock."

Though not so old as some of its esteemed contemporaries, the New Photo Era is seeking to be more and more useful to its readers each month by becoming the most up-to-date photographic magazine published in the United States. We have no old stock on hand, and aim to supply only new ideas,— keeping the reader thoroughly in touch with the progress of the art of photography. This is our mission. Indeed, our motto shall always be: "We aim to help." By this we mean that the reader will find in our pages each month a record of the work done by photographers all over the world. By its aid he should be able to utilize the experiences, avoid the errors, and profit by the example of others. It is sure to be a rich harvest, this aggregation of world-wide experiences, and we offer it to our readers through the New Photo Era, "Established Yesterday, No Old Stock."

Protection for Photographs Representative Fitzgerald, of New York, has introduced a bill in Congress making it illegal for any person engaged in trade to use for advertising purposes the name or pictures of any living person without having first obtained his consent in writing. A maximum penalty of one year in prison and $1,000 fine is provided.

"The necessity for some such legislation has been emphasized by a recent decision of the New York Court of Appeals," said Mr. Fitzgerald, in explanation of his bill. He then cited the case of a young woman who sought to restrain the unauthorized publication of her picture as part of an advertisement, in which "the court," he said, "practically determined that if the picture were libelous, its use could be restrained, but the mere fact that the picture was a true likeness and its use unauthorized afforded no ground for redress."

Blood-thirsty Redskins Child Bayley, editor of our esteemed contemporary, *Photography*, London, recently made a flying trip to the States. He visited New York, Buffalo, and Chicago, but failed to reach Boston. Mr. Bayley admits that he saw the editor of *Camera Work*, Mr. Stieglitz, pulling proofs — while Editor Tennant, in a recent issue of *Photo Miniature*, speaks enthusiastically of a dinner given Mr. Bayley in New York.

Commenting, in *Photography*, on what he saw, Editor Bayley declares that the American type today is not English, German, Swedish, nor Latin, but the North American Indian variety seems to predominate.

It is not the first time that we have heard that there were Indians in New York, and Mr. Bayley ought to be congratulated on having escaped with his scalp whole, from such blood-thirsty redskins as Tennant and Stieglitz, and the ferocious Photo-Secessionist tribe. It was, perhaps, unfortunate that his experience should have been confined to New York Indians exclusively. We urge upon him the necessity of seeing Boston and Philadelphia before drawing his final conclusions regarding the future American type.

Color Photography

With our English contemporaries this subject has been receiving considerable attention of late, though nothing absolutely new has been developed. In America, a Mr. Henry Miley of Lexington, Va., after years of hard work has patented a process for reproducing photographs in natural colors, which he is about to give to the scientific and commercial world. Although a company has been formed in New York to exploit it, no details of the process have yet been given to the public.

S. Belknap Hargreaves of Indianapolis, Ind., has discovered how to make photographs in color by a modification of the Lippmann process originally adopted by Prof. Gabriel Lippmann, of Paris, in 1891. Lippmann's method was to expose a sensitive film in contact with a metallic mirror. The effect of the latter, which was formed by running a layer of mercury in behind the film, was to reflect back the incident light waves stationary. The stationary vibrations, falling in the interior of the sensitive film, impressed their own structure upon it, and by virtue of the structure thus imparted, the brown deposit of silver appeared imbued with the same colors as were possessed by the image in the camera. This was actual, scientific, color photography, but it was of no practical or commercial value, for the reason that it resisted all attempts to obtain prints from the negatives.

Mr. Hargreaves claims to have so far improved upon this process that he produces prints in natural colors from the negative.

The latest claimant, however, is Prof. A. B. Leckenby, U. S. agrostologist at Unon, Oregon. As far as it is now known, the new method is the same as the old system of photography up to the act of making the print. The difference lies in the emulsion on the sensitive paper. The slight differences in the shades on the negative plate are just enough to act in different ways on the paper during printing and produce the several colors, and after the toning and fixing operations, the picture comes out resplendent in colors instead of all the same slate or sepia tone.

Up to the present time only one fault has been found with the pictures. They are not all the same shade. A red rose may show pink at one time, and with the next tone and fixing a dark crimson. In either case the color will still be red, but the shades will be decidedly different. Even this objection, which is not in itself very serious, Dr. Leckenby thinks will be remedied, and he has, he says, worked out a method which will have the effect of bringing the various prints to a more even tone. It is generally understood that Professor Leckenby will not patent his discovery or try to make money from it, but he will give it to the world. He is, however, taking steps to procure the necessary papers to secure for himself the honor of having discovered the new method and to prevent any one else from using it as a money making scheme.

Government Work

Practically every executive department in Washington has its official photographer, says the New York *Tribune*, whose work consists in the preparation of illustrations for government publications, the recording of phases of botanical and zoological life, the physical characteristics of various regions, etc. Fortifications, ordnance, uniforms, and so on are faithfully reproduced by the photographer of the war department, and the negatives and prints are filed for future reference. Vessels under construction or being repaired, marine apparatus, armament, uniforms, and coast topography are similarly reproduced by the photographer of the navy department. A variety of subjects, ranging from the artificial culture of the tuberculosis bacillus to the latest improvement in scientifically bred corn, from the surra-infected horse of the Philippines to the latest forest improvement in the Adirondacks, are similarly recorded by the photographers employed by the department of agriculture. Several photographers employed by the department of the interior devote themselves to the work of the geological survey, the bureau of Indian affairs, the patent offices, etc.

The most practical, and in some respects the most important, work in this line is performed, however, by the official photographer of the treasury department, whose negatives and prints have proved of the utmost value to the secret service division, the supervising architect, the bureau of customs, the commissioner of immigration, and numerous other branches of Uncle Sam's great counting-house.

Historical Records

A new and important development is the application of photography to the perpetuation of the government records. It consists in the preparation of photographs of the tons of state papers which now encumber the government files. In many instances ten or a dozen of these papers can be photographed on a single negative. A comprehensive index will be kept and a print of the required document, of any desired size, can be made at any time. In this way negatives which will occupy cubic inches can be made of papers which occupy cubic yards, and only in the rarest instances will it be necessary to refer to the originals. On the same principle the army and navy rolls can be reproduced. At present these rolls are constantly wearing out and require endless copying, with the possibility of copyists' mistakes, etc. A photograph made the same size would obviate all this. No errors would be possible, and new prints would be available whenever they were required.

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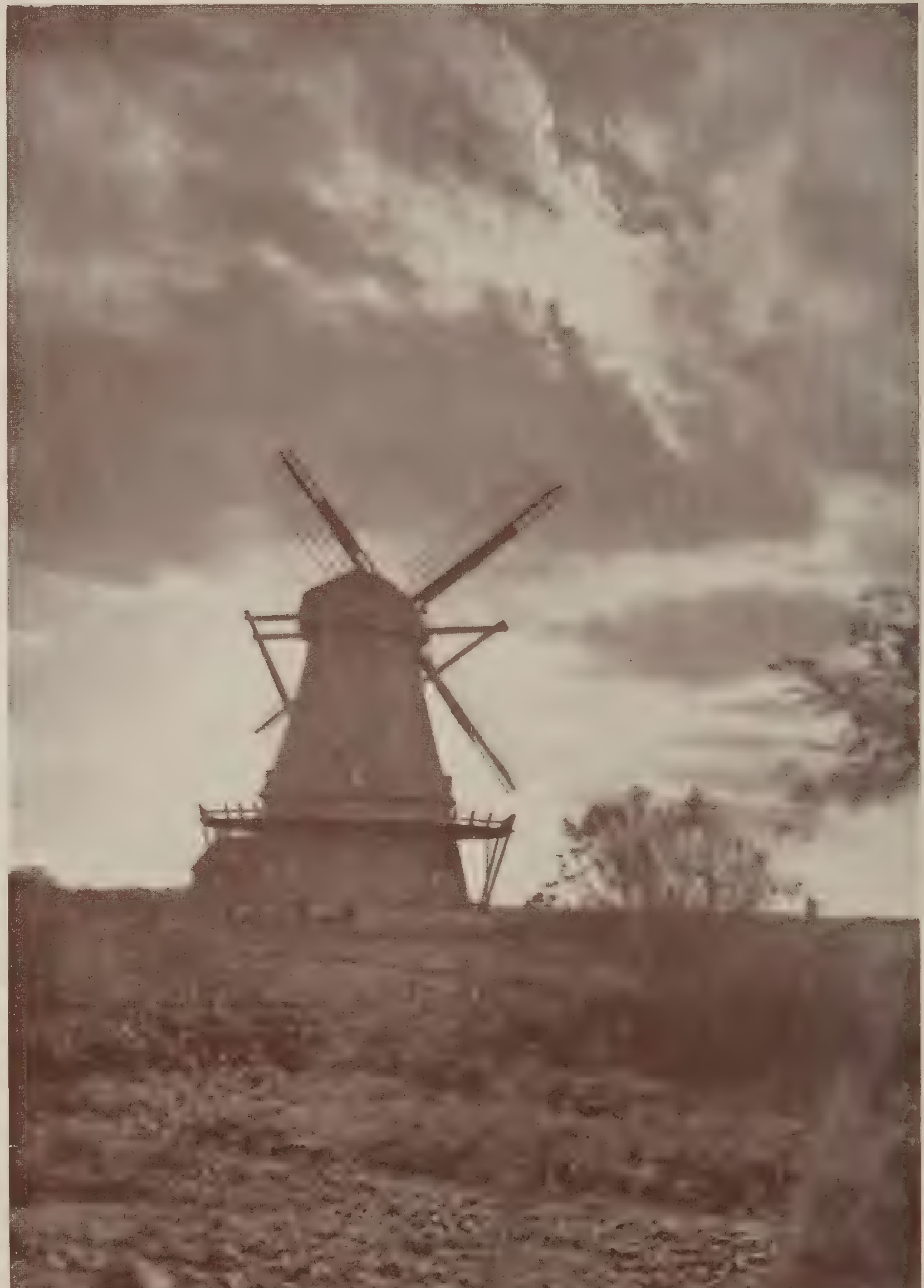


A RIFT IN THE CLOUDS. By **E. M. Blaine**, Chicago Salon.

PHOTO ERA

Frontispiece for February, 1903

PHOTO ERA

The American Journal of Photography

Volume X FEBRUARY, 1903 Number 2

To-day, who gaze along the years,
The finished time of toils and tears,
That still in varying peace and strife
Have gone to make the nation's life —
Who backward gaze must own the debt
We owe our holiest memory yet;
For all our best, bequeathed, begun,
We needs must honor Washington,
Still first among our good and great,
The grandest name that stars the state.
—Sangster.

Howard Day Aiken, the Child Photographer

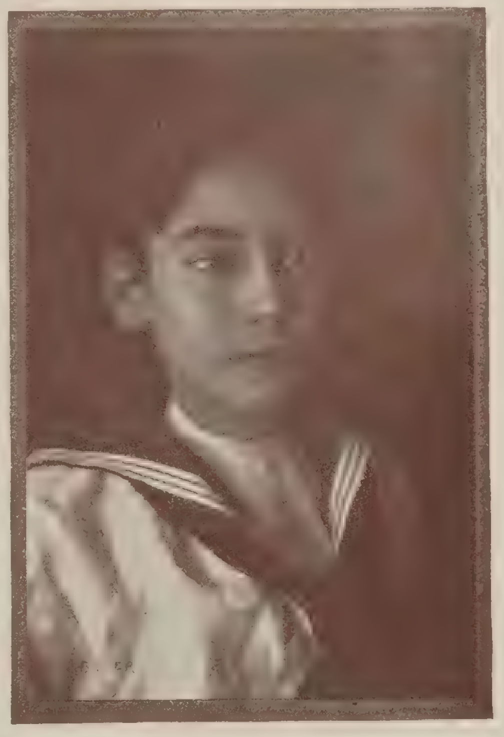
BY THOS. HARRISON CUMMINGS

> Who has no inward beauty none perceives,
> Though all around is beautiful.—*Dana*.

THE possibilities which the photographic art opens to the careful and artistically inclined youth of to-day are no better illustrated than in the achievements of Master Howard Day Aiken, a Philadelphia schoolboy.

The subject of this sketch was born in New York City fourteen years ago, but has spent most of his life in Philadelphia. He is the grandson of Mr. Frank E. Aiken, formerly of Boston, and now a well-known actor and theatrical manager of Chicago. For a number of years the boy's health was so delicate that it was not practical for him to attend school or study. He commenced school life in 1899, being then in his eleventh year. He learned to read almost at once, and never having been able to associate much with his playfellows in out-of-door sports, books became his companions and delight.

About this time one of the "dollar" cameras of a well-known company was received by him as a gift, and he at once commenced taking photographs, the majority of which were pictures of his friends and his dog "Hustler." The results were so pleasing that he developed a desire to work in a more pretentious field, and obtaining a 4 x 5 camera he began making portraits by the light of a window. House portrait work was his ambition, and working first with his small camera and later with a 5 x 7, he has produced portraits that would do credit to our best professionals. His pictures of children are especially life-like and interesting; child as he is, he seems to catch the natural and pleasing expressions of his little subjects almost instinctively, and absolutely without effort



HOWARD DAY AIKEN.

"There is a white-throated song sparrow," says the *Naturalist*, "not the most beautiful singer of the sparrow family, but still ranking high as a songster, that has the peculiarity of singing always, singing by day or by night. This is the fellow that pipes so bewitchingly from the syringa bushes near your bedroom window at night. He sings because the song is in his heart." Such is the inspiration that comes unbidden, it would seem, to this boy-photographer in all his work. Like the bird song at night, it springs from his heart, and he seems to see and catch the beauty in his pictures which, ordinarily, only the more appreciative souls of artists can produce.

Generally it is assumed, that to make artistic pictures one should be familiar with the technique of the painter, and have a thorough knowledge of composition, perspective, the proper management of light and shade, the point of view, etc.

Such knowledge, it is well known, can only be obtained by a careful study of the works of the masters, who have had the advantage of the experience of centuries.

In the case of young Aiken, this knowledge is supplied by his lens for the drawing of his picture, and a natural aptitude for the artistic handling of lines and tones enables him to complete and perfect his work. It is artistic feeling working in him unconsciously that results in artistic effects in his pictures. "After all is said, Art is only Nature concentrated," says Balzac; and the great poet Dante declared that "Art, as far as it has ability, follows Nature as a pupil imitates his master."

Thus it is that this gifted child of nature, unspoiled by the conventionalities of the schools, is producing portraits the envy and despair alike of some of the best workers in the country, by following simply and lovingly his instinctive grasp of the beautiful.

A close inspection of the pictures accompanying this article will show that his success is perhaps more largely pictorial than photographic in character.

While, theoretically, the perfect portrait should be one which gives us the most perfect likeness of the sitter, it is generally conceded that the most artistic picture is the one that idealizes the subject. In other words, the portrait that best embodies the artist's conception of the character and personality of the sitter, rather than the sitter's actual look and appearance, is the one to be preferred.

Furthermore, a correct likeness and pictorial attractiveness together give additional pleasure and constitute the ideal picture.

The Aiken portraits have these qualities to a very marked degree. They combine the plain portraiture of the old school with the pictorial methods of the new; and in the pursuit of his pictorial ideal, it will be remarked that the young artist in no way sacrifices the qualities of the likeness in his prints.

In posing his subjects it is interesting to note the methods employed by this young photographer. In the case of the "portrait of a boy," the subject was a nervous one and tired easily. Picture books and the phonograph were resorted to; and while the machine related a funny story the subject dropped into a natural position, and the picture was made before he had time to think. Graceful, simple, easy poses are characteristic of the Aiken pictures.

While his theoretical knowledge of lighting portraits must necessarily be limited, nevertheless, it must be confessed that practically he is a past master of the art. Some one has said that "in the truly artistic picture you see no system of lighting." And in analyzing these portraits we see the due subordination of everything to the central point of interest, the head attained by soft definition and a suitable lighting that seems to follow no rule but common sense and nature.

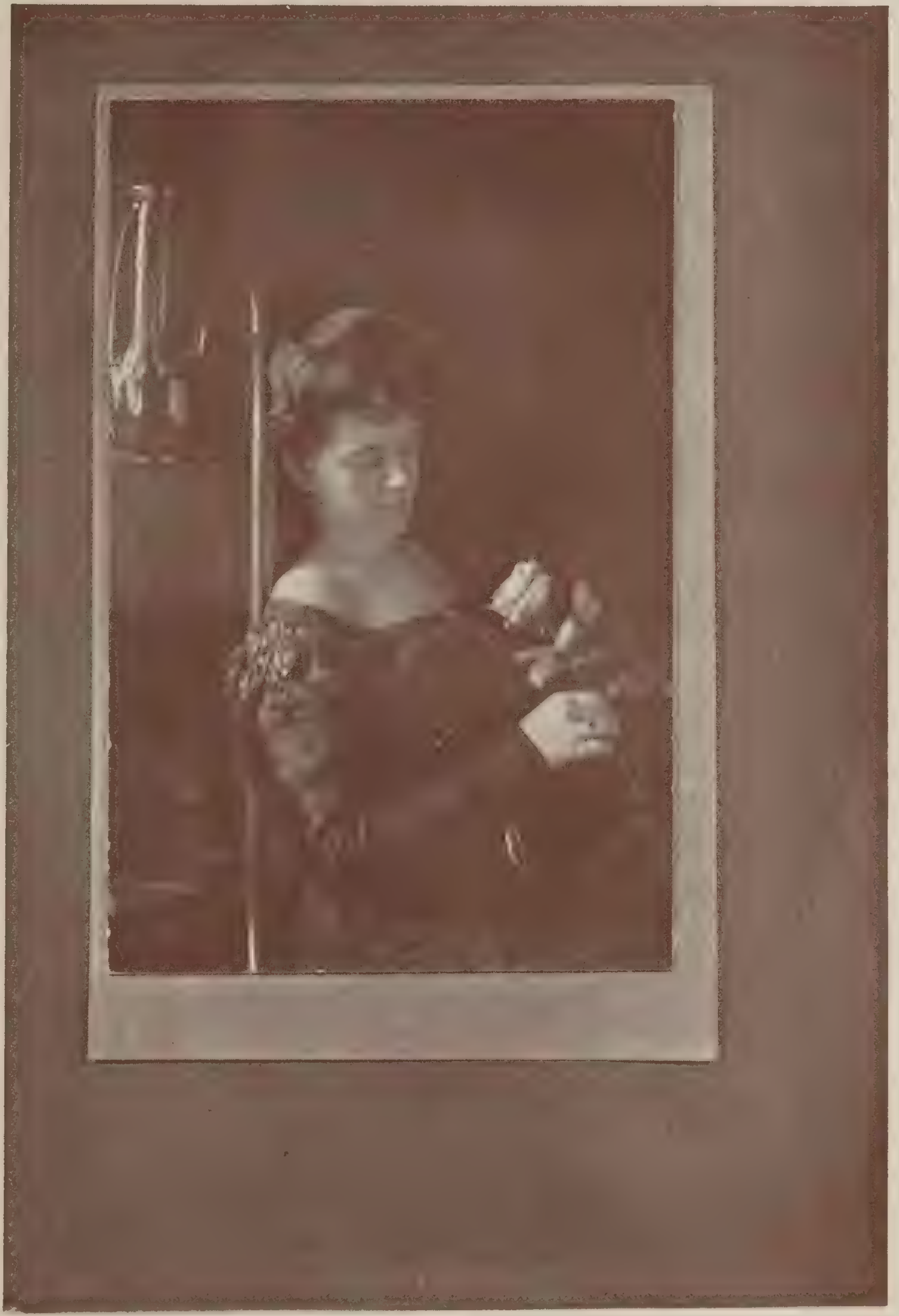
Meanwhile, it is interesting to note how simple his pictures are, and how entirely devoid they are of accessories. The great majority of photographers crowd too much into their portraits. Master Aiken has learned the valuable lesson of leaving things out.

All his pictures being made at home, the surroundings are plain and natural. The furniture and accessories are entirely subordinate, and are not allowed to disturb the general distribution of light and shade, nor the harmony of line, in the picture. His remarkable success in this particular again emphasizes the fact that the best way to avoid failure is to choose simplicity.

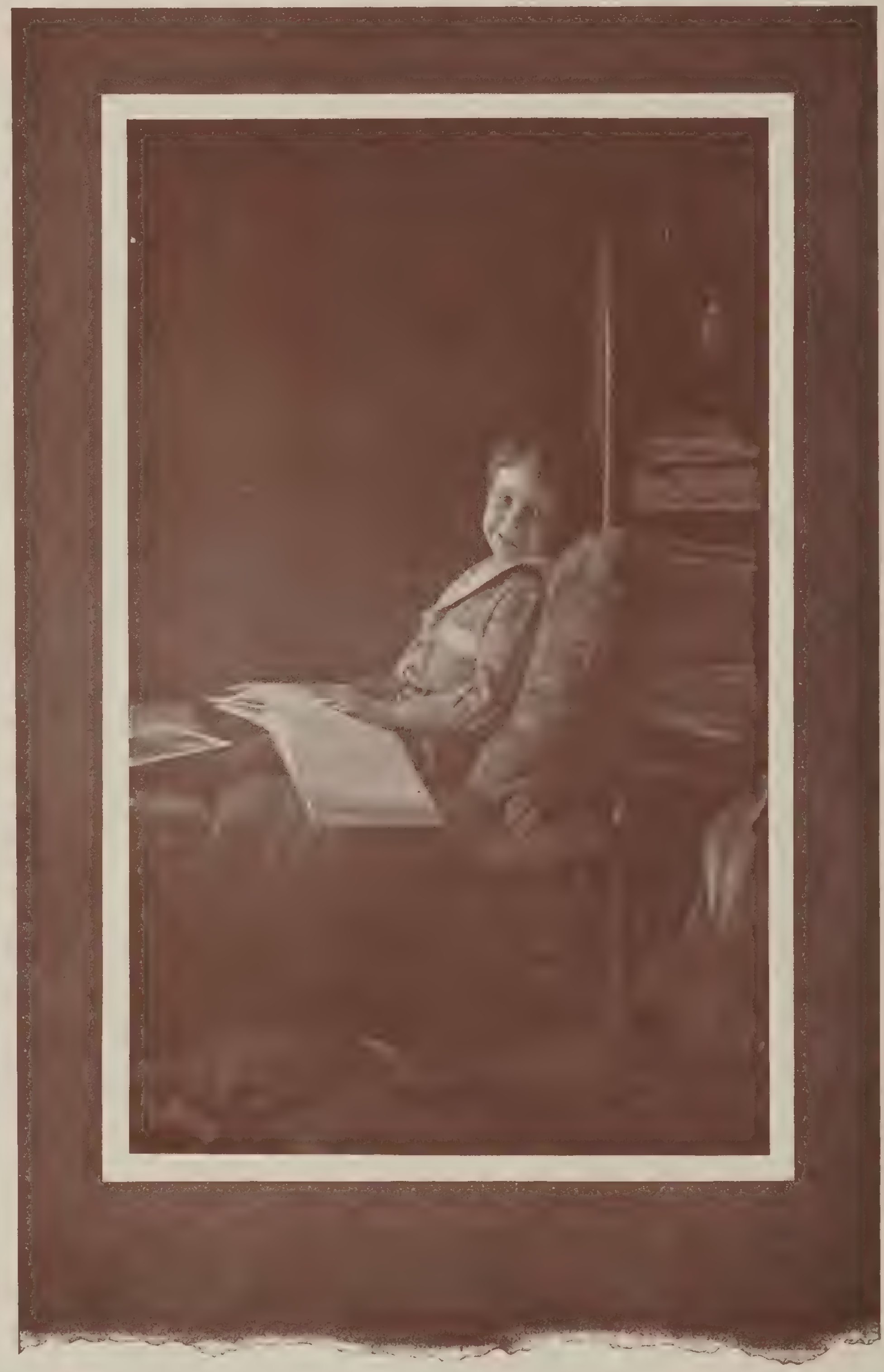
Finally, from the exposure of the plate, through the development of the negative, printing, and mounting, every detail of the process, until the picture is revealed, is the personal work of the young boy photographer. Here, again, the opportunity is afforded him for the introduction of his striking individuality, and the way in which he does it raises his work to the level of a production of art rather than of mere mechanism.

All his pictures are printed on sepia platinum, and the finished prints, mounted on vellum and papers in soft brown colors, give abundant evidence, if any were needed, of the great care in mechanical details as well as artistic feeling which he shows.

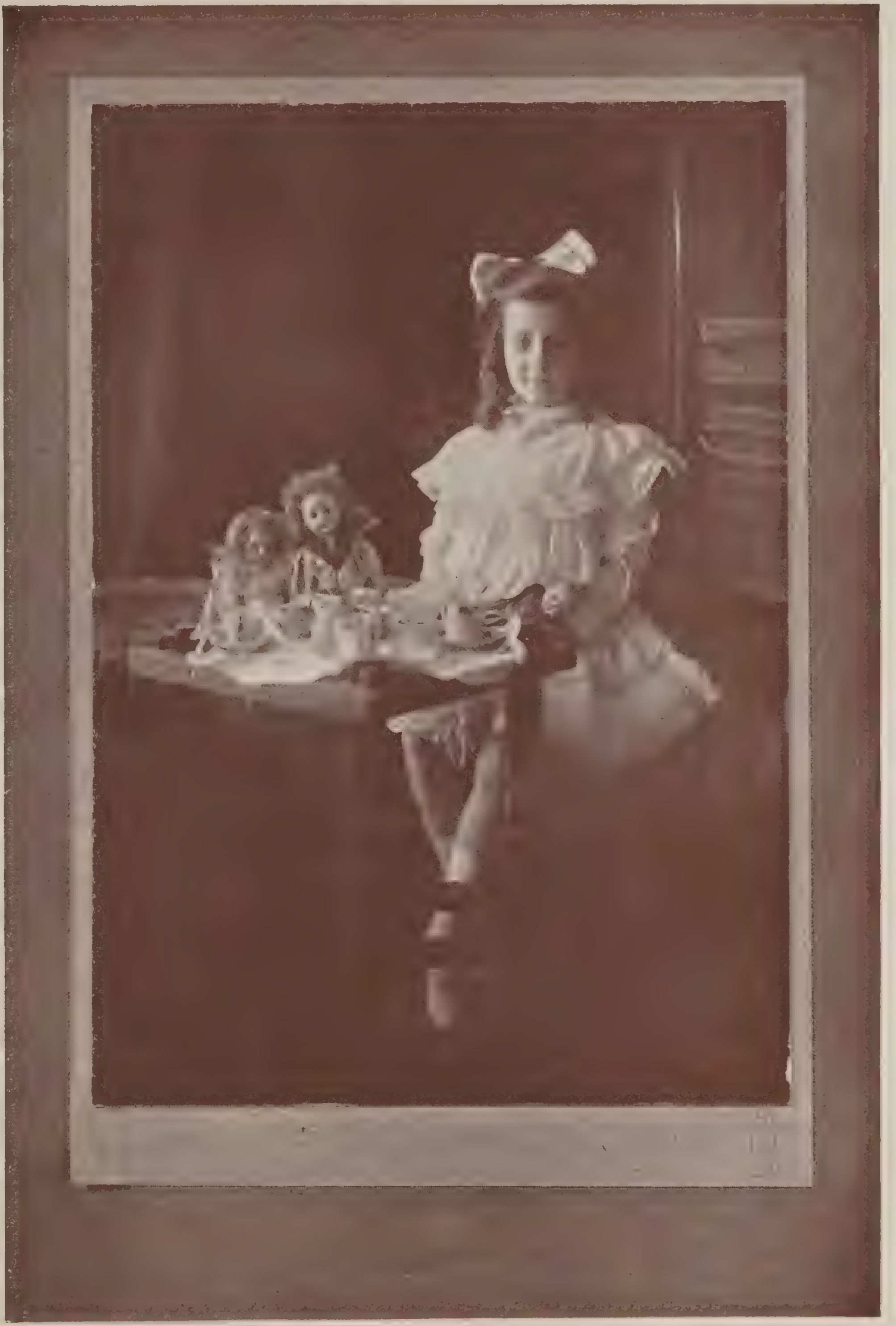
Taken as a whole, this photographic work by one so young, with inexpensive instruments and done under great difficulties, is, to say the least, very remarkable. We confidently predict great things in the future from Master Aiken, scholar at the Penn Charter School, Philadelphia.



PORTRAIT. By HOWARD DAY AIKEN.



PORTRAIT OF A BOY. By HOWARD DAY AIKEN.



PORTRAIT. By HOWARD DAY AIKEN.

PORTRAIT OF DAY-BAKER. By HOWARD DAY AIKEN.

Photography

Written for the Photo Era

Oh, Art preservative! how sweet to trace
Through lonely years some loved and long-lost face;
Though death the dear original may claim,
The features live — brow, eyes, and lips the same.

And, thus it is, prosaic as thou art,
Thou hast brought balm to many a bleeding heart.
Without thee memory would grow blurred and gray,
And Love would faint and die beside the way.

—Lilian M. Ratcliffe.

A Chance Negative

GREGORY had the kodak craze in its worst form. The only wonder was that he had not taken it sooner, for from his earliest infancy he had habitually caught everything that was in the air — from measles to Anglomania.

He had countless whims and vagaries and abundant means with which to indulge them. He "went in for" every fad and fancy of the day; he had wheeled and played tennis; he had fenced and golfed and coached in turn. Within the space of three years he had run the gamut of every period and every nationality, ranging from early Colonial to Louis Quinze, from Oriental luxury to primitive Western simplicity, in the furnishings of his apartments — regardless of any consideration of time or season or fitness. The Russian craze struck him in early September, during a particularly torrid spell of weather, and he received his friends in a fur-trimmed garment (though the perspiration oozed from every pore), gave them strong tea drawn with the aid of a samovar, and treated them to koumiss which made them deathly sick. Three months later his callers shivered on chill straw mattings while seated uncomfortably upon the lightest of bamboo chairs under a canopy of Japanese lanterns and umbrellas; stumbled over "sleeping blocks," and ran into purposeless screens and useless but decorative tall jars which beset their unwary feet; and before they had time to accustom themselves to what Dexter irreverently called "Gregory's junk shop," a group of friends who dropped in on him one evening found him in full Turkish costume, from fez to slippers, seated cross-legged on a striped divan, smoking a narghile and surrounded with oriental furnishings; while his man, similarly attired, would have served them with some unspeakable Turkish drink, had not Barfield (who had the courage of his convictions) protested.

Therefore when, one evening in Dexter's rooms, Gregory announced his interest in photographic art and his intention of purchasing a kodak the following day, Mocquot and Barfield exchanged smiles and meaning glances, while Dexter, who had borne the brunt of all Gregory's enthusiasms and had ceased to find them amusing, sighed resignedly.

"Yes," Gregory was saying, "I shall certainly fit myself out to-morrow. I haven't yet definitely decided whether to get a kodak or a camera. Which should you advise, Dexter?"

"Neither," said Dexter, decidedly. "They're more trouble than they're worth. I've tried it and I know. But if you want to experiment, take mine. It's there in the closet and you are welcome to it as long as you want it, which I fancy won't be a century. Don't waste your shekels on a kodak, Greg — you'll need your whole income for supplies."

"You'll find it a lot of hard work if you do your own developing, and it's no fun if you don't," put in Barfield. "I slaved myself half

"Oh! the Southern Girl
Is a luscious peach
Which usually hangs
Just out of reach."

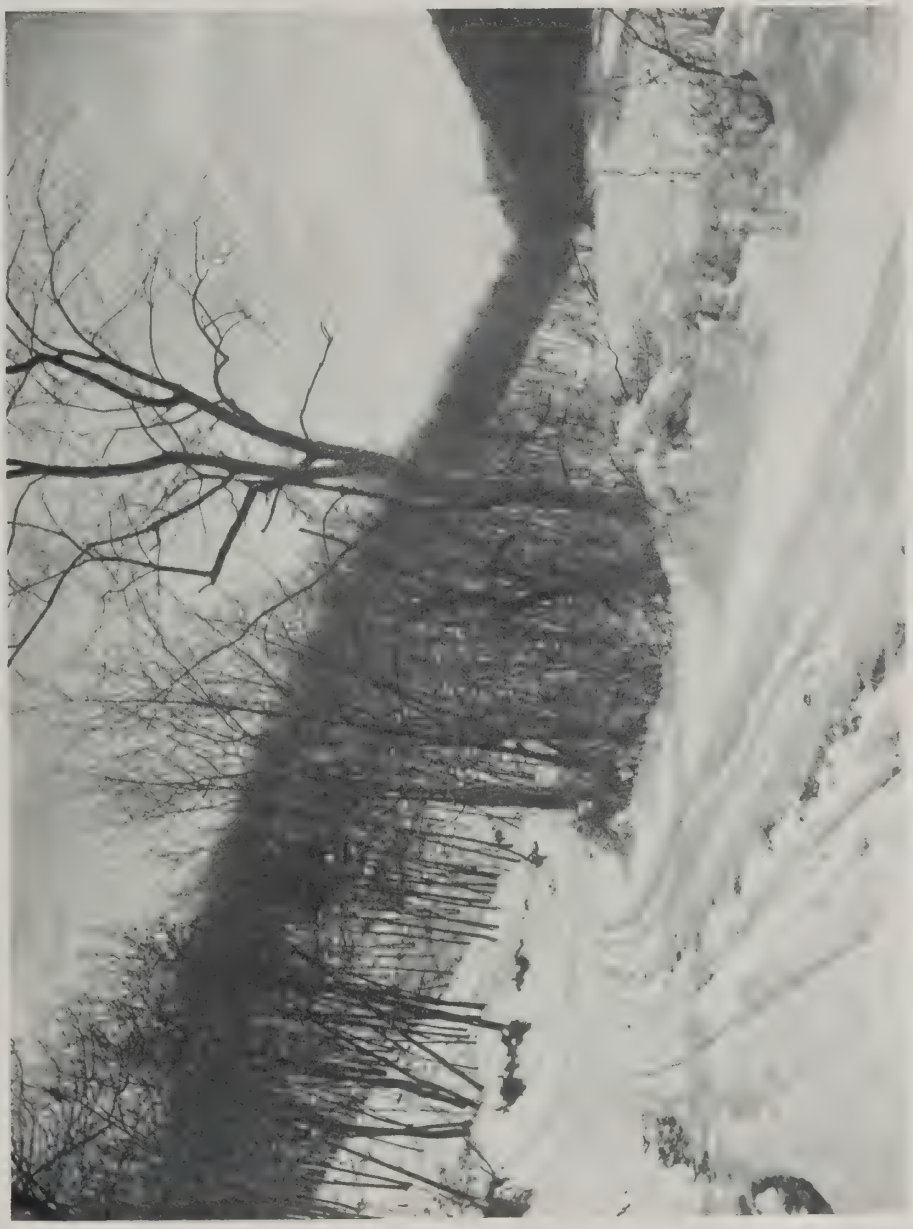
DIAMOND DONNER AS "THE SOUTHERN GIRL."

to death and ruined my naturally sweet temper with my 'Poco.' I finally gave it to a fellow I had a grudge against. Ever do anything with yours, Mocquot?"

And while Mocquot was detailing his experience, which appeared to have consisted chiefly of "fogged plates" and "under exposures," Dexter was pulling down from the top shelves of his closet, kodak, ruby lamp, and developing apparatus — a complete photographic outfit — whose manipulation he was explaining to Gregory. He took out one of the plate-holders to display its mechanism, and discovered from its weight that it was not empty.

"Hello, it's loaded!" he said. He took up another. "And this — and this. They're all loaded, Gregory. Don't know whether they're any good or not — I haven't used it for an age — but you might experiment with them. Your first lot will likely be failures, anyhow. Here are three plates that have been exposed — these facing from the lens. Don't get them mixed. I've forgotten what they are and where I made them. Suppose you take them along and develop them for me."

Within two days Gregory had fitted up a tiny dark room, had exposed the nine remaining plates in Dexter's kodak, and at last, triumphant and happy, was developing them by the dim light of the ruby lamp. His own efforts proved to be for the most part failures, though one or two were fairly clear. Of Dexter's three plates one was "fogged," the second was a picture of his dog "Blix," and the third — Gregory fairly trembled with excitement and interest when the outlines of a girl's figure stood out upon the plate almost the instant the developer touched it. She was seated, with careless grace,



T. Edward Schiedt.

WINTER SCENE AT VALLEY FORGE, PA., IN 1903.

Taken at Three P. M., in Strong Light, with Euryscope Lens, Series IV.
Stop F:32. 10 seconds. Orthonon Plate.

in an old-fashioned swing, in a veritable bower of leaf and blossom; and, despite the unbecoming reversal of light and shade, Gregory was sure that she was young and pretty. His prophetic soul scored one when he printed out a negative from the plate. She was more than pretty — she was beautiful — in her broad hat and white gown, with the blossoms all about her. The pose, though unstudied, was perfect. Her face was slightly lifted and her eyes (which Gregory felt sure were blue) were set in a look of dreamy abstraction. The picture was really artistic and its central figure charming. Gregory lost his heart and his head simultaneously. He instantly wired Dexter (who was at Nahant) to know just where those three pictures were taken, and when that unsympathetic wretch wired in reply: "*Haven't an idea. Oshkosh or Skowhegan, probably*," Gregory took the next train down to the shore — only to find that Dexter had flitted to Asbury Park. He followed him there, and succeeded in finding Mocquot, who gave him the cheering information that Dexter had gone to spend a week with his *fiancé* at Newport, where her father had a cottage. Nothing daunted, Gregory pursued his friend, dragged him unwillingly from the society of his betrothed, showed him the picture which he had toned and mounted (neglecting to mention that he was wearing a duplicate in miniature in his watch), and implored him for information as to the original. Dexter, who at first had not displayed much interest in the matter, woke up at the sight of the portrait.

"Jove, she's a beaut, isn't she?" he exclaimed. Dexter was slightly addicted to slang. "I remember it perfectly now. It was when I was down in Lexington with Courtney — you remember Courtney? — and I was prowling around on the outskirts of the town one afternoon with my kodak, taking snaps at pretty much everything I saw, when I chanced upon a quaint, stately old place — a typical Kentucky mansion, set in a perfect tangle of trees and shrubs and vines. There was a swing on a remote corner of the lawn, and in it — oh, Jupiter, Greg! — with some sort of flowering shrub for a background, was a — a — well, I won't try to describe her — you've seen her picture. She didn't see me, and I didn't mean that she should. She had on a big white hat, pushed back from her face, and a white dress, with a spray of something green in her hand. She couldn't have chosen a prettier background or a prettier pose if she had tried. She seemed abstracted, though a group of noisy children were playing on the lawn near by. She was sitting quite still, with her eyes — lovely, dark-lashed, violet eyes, old fellow — fixed on vacancy. I set the kodak and had just closed the shutter when she looked up and saw me. I fled precipitately — rejoicing, however, in the thought that I had secured the picture I wanted. I meant to ask Courtney all about her, but when I got back to town I found a telegram from Alice, who had gotten home from abroad a week sooner than I had expected, and, of course, I forgot everything else after that. I left Kentucky that afternoon and I hadn't thought of the picture since."

Four hours later Gregory was on his way to Kentucky, with all the information Dexter was able to give him as to the residence of his dulcinea, whom he meant to meet at any cost. What dreams he dreamt; what pictures his fancy painted as he sped across the fair Southern landscape! How his heart throbbed as he crossed the boundaries of the blue grass and neared Lexington — the home of his fair unknown. He drew out the picture and gazed at it surreptitiously. What a patrician face it was! How proudly the little head lifted itself upon the slender throat; how graceful the attitude; how pretty and natural the pose! A typical Kentucky beauty, Gregory thought her. He pictured her the eldest daughter of a wifeless father, the gracious mistress of a stately old Southern home, the pet of the household, the pride of a circle of admiring friends. His eagerness and impatience increased in inverse ratio to the distance between him and his inamorata.

He confided the whole story to Courtney, who heard him with cordial interest, helped him to locate the place — which they did with little difficulty, so accurate was Dexter's description — and gave him all the assistance and information at his command.

"Yes," Courtney said. "The Forresters — Eastern people, who have lately come to Kentucky — own the place. I know Mr. and Mrs. Forrester slightly, but I can't quite account for the young lady. Probably a relative or a guest in the house. If you will wait a day or two I will make inquiry and find out, if possible."

But Gregory's impatience would brook no delay, and that afternoon found him ascending the steps of the Forresters domicile armed with a card bearing the inscription: "*Mr. Hugh Allingham Courtney, introducing Mr. Reynolds Gregory.*" His heart was beating tumultuously and his hands were cold with suppressed excitement, for, as he came up the terrace walk, he had seen a face at an upper window, and the face was the face of the picture! He was shown into the cool, dark parlor, and before he had time to pull himself together he was facing Mrs. Forrester and (as he later confided to Courtney)

PORTRAIT STUDY. By George H. Hastings.

feeling like a fool. Mrs. Forrester was not exactly a person to inspire tender confidences. She was an imposing matron, with a crisp Eastern accent, a brusque manner, and a pair of sharp gray eyes, whose keen stare was accentuated and made more disconcerting by the aid of a pair of gold-rimmed glasses.

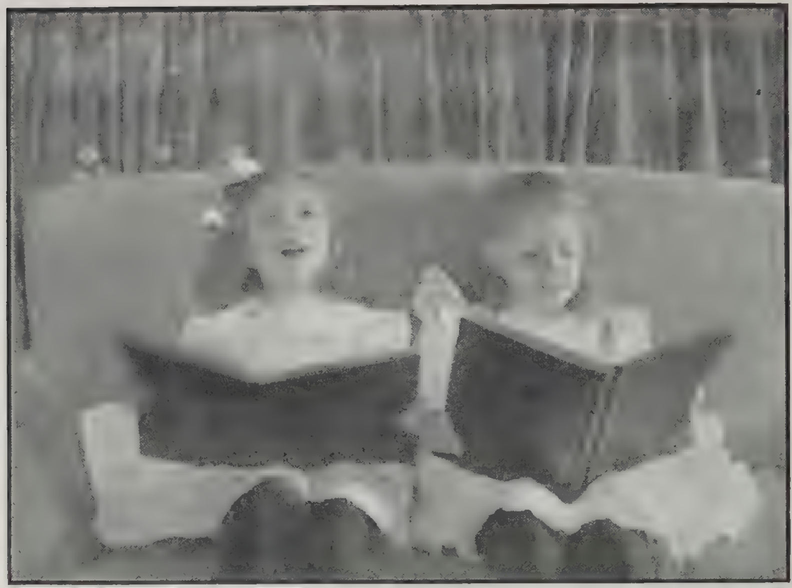
She had evidently not been in Lexington long enough to realize the value of Courtney's name, for her manner was untempered by any degree of warmth. She waited for Gregory to state his errand with an air which made him distinctly uncomfortable and rendered it all the harder to begin. However, timidity was not one of Gregory's weaknesses, and after a brief exchange of civilities (rather awkward on his part and wholly non-committal on hers) he plunged into his story, related the incident of the picture, and, mendaciously stating that business had brought him to Kentucky, went on to speak of his interest in the portrait and his desire to meet the original. Finally he produced the likeness, and submitting it to the inspection of the eye-glasses, suggested that possibly Mrs. Forrester could assist him in identifying the object.

Mrs. Forrester scrutinized the portrait a moment in absolute silence — a very uncomfortable moment for Gregory — and then, rising and returning it (she held it as if it burnt her fingers), responded in tones which sent the thermometer racing zeroward :

"Certainly. The picture is that of my servant, the children's nurse, and you will pardon my saying that in my opinion she would have been better employed in looking after her charges than in attitudinizing for the benefit of passers-by. I bid you good afternoon, Mr. Gregory." — (Ladies' Magazine).

The Third Chicago Salon

CHARLES E. FAIRMAN



THE DUET. J. P. HODGINS, Chicago Salon.

" The joint management of the Third Chicago Salon is unanimously agreed to maintain the standard of this annual exhibition on the highest plane of artistic excellence."

* * *

" The Chicago Photographic Salon owes its very existence, as a permanent institution under the patronage of The Art Institute, to the fact that it stands for the modern aspiration towards truly artistic photographic expression, as contra-distinguished from mere technical merit. Artistic merit is the primary consideration of the Salon Management; technical merit is secondary."

* * *

" The Photograph which nobly expresses a noble conception of Truth, Beauty or Ideality, is a work of the fine arts precisely as if it had been executed by the painter or the etcher or the sculptor in pigments, or lines, or in plastics."

(From announcement of Third Chicago Salon).

THERE seems to be no mistake, from the above language, as to the purpose of the Third Chicago Salon to treat photography as a fine art, and to select the work for exhibition purposes according to its value, judging from the usual application of art standards. If the photographic artists have failed to make good their claims, it has been their own fault, not in any manner the fault of the management.

The formation of a jury of selection from artists, has for some time been advocated by many leading photographers. In this instance, the justice of the proposition has been admitted, and the submission of about 1600 pictures to the artist jury clearly proves that the photographers have no fears of the standard adopted, and the selection of 191 pictures for exhibition is the verdict of the artist jury as to the fitness of the selected work to stand for the claims of photography to artistic excellence.

The exhibition as a whole was wholly dignified and serious in the character of the work accepted. It was singularly free from works of a mediocre character. It was lacking in those examples of photography which partake of the mechanical and commercial phases of the art, an exhibition of which all of the friends of photography may be justly proud, and accept as an earnest of decided progress along art lines, and higher ideals to be reached in the future.

In mounting, framing, and in all of the methods of presenting the work, there seemed to be less eccentricity than might be expected. It proves that the photographers have been thinking deeply on exhibition matters, and that their thought has been valuable.

Passing from a general consideration of the salon to the work of the individual exhibitors we find that there are seventy-eight exhibitors represented, and that quite a section of the country, with the exception of the South, has furnished work for this exhibition. Fourteen examples from what may be termed the South is hardly a fair representation from that section when we consider the support afforded from California, a section representing a greater distance from the city of Chicago.

Among other pictures exhibited by Robert E. Weeks, his "The Last of the Sycamores," "The Approaching Storm," and "In the Sheep Pasture," are all worthy of notice as good examples of landscape studies. The last mentioned picture showed a good disposition of the foreground, and a pleasing tonal value to the picture. The sheep, perhaps, were a little too numerous for a strong composition, but they were well separated, and there was none of the feeling of too close arrangement of the sheep to make the planes of the picture crowded together.

George Donehower, of Philadelphia, exhibited three pictures. His "Desdemona" furnished a picture of a model with a truly classical face, somewhat sad and pleasingly draped. A picture showing good vigorous work with much artistic feeling.

The work of Alvin Langdon Coburn, of Boston, did not appeal to me as much as some of his work exhibited elsewhere. The work shows great courage and an impulse to lift his picture-making out of all possible connection with photography, but there is a feeling that he has hardly succeeded in reaching the end sought for. His portraits of Alfred Stieglitz, F. Holland Day, and Mrs. Gertrude Kasebier, suggest that he has seen in these persons different attributes than have been noted by others. His "Ely Cathedral" impressed me more favorably than any of his other work. In this there was great simplicity of composition, a forcible presentation with a vigorous style of the truly essentials of the subject. It resembled much a hasty pastel sketch made with great skill, and

EVENING MEADOWS. By Frank E. Marks, Chicago Salon.

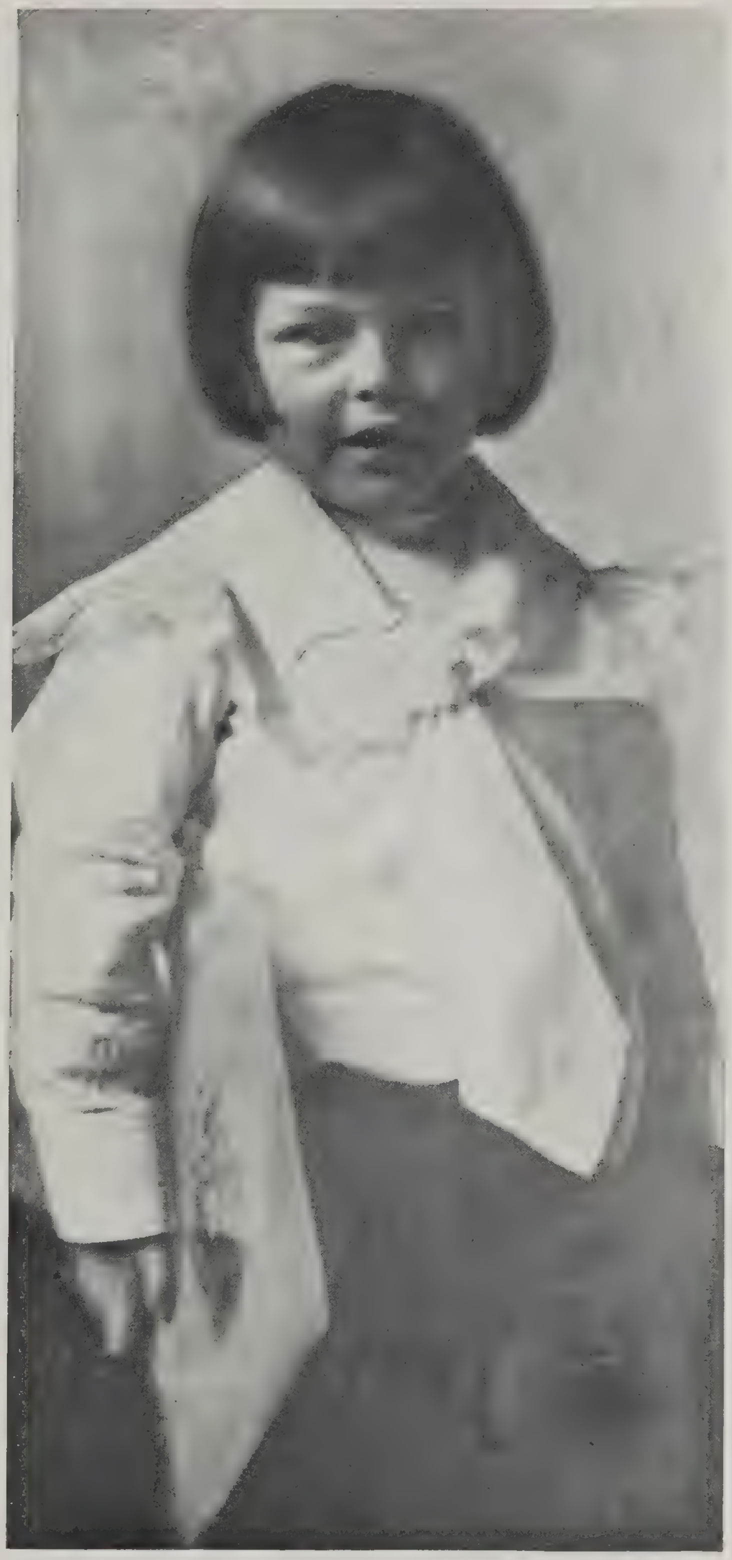
"MOTHER AND CHILD." By SARAH J. EDDY, Chicago Salon.

with a proper disregard for the smooth, undue elaboration of unnecessary and unimportant portions of the subject.

L. Hamilton Keller, of Camden, N. J., exhibited "A Newsboy at Night," one of the charming night scenes of the salon. The picture contains a fine interpretation of a night effect, and possesses great charm for its realism, and for the originality of subject. It may be that a little of the foreground trimmed would give better concentration to the vital points of the picture, but as it is there is much to admire, and a good lesson is contained in the possibilities of photography in this direction.

Thomas A. Morgan, of Denver, Colorado, was one of the exhibitors represented by a single picture. His "Out of the Mists" was a somewhat unusual effect to expect of photography. The picture showed a misty landscape with a clump of trees vaguely defined in the right distance. From out the floating banks of mist a team is seen approaching to the center foreground. The effect of mist is vividly pictured, and the composition one of much artistic selection.

Myra Albert Wiggins was represented by four pictures, all of them good but differing greatly from much of her exhibited work. One



BOY WITH BOOK.
By Meredith Janvier,
Chicago Salon.

is inclined to expect some of the quaint genre studies of peasant folks with interesting children as Miss Wiggins' contribution to an exhibition. Her work this year showed the same technical excellence as before, but lacking somewhat the usual element of human interest found in her former efforts.

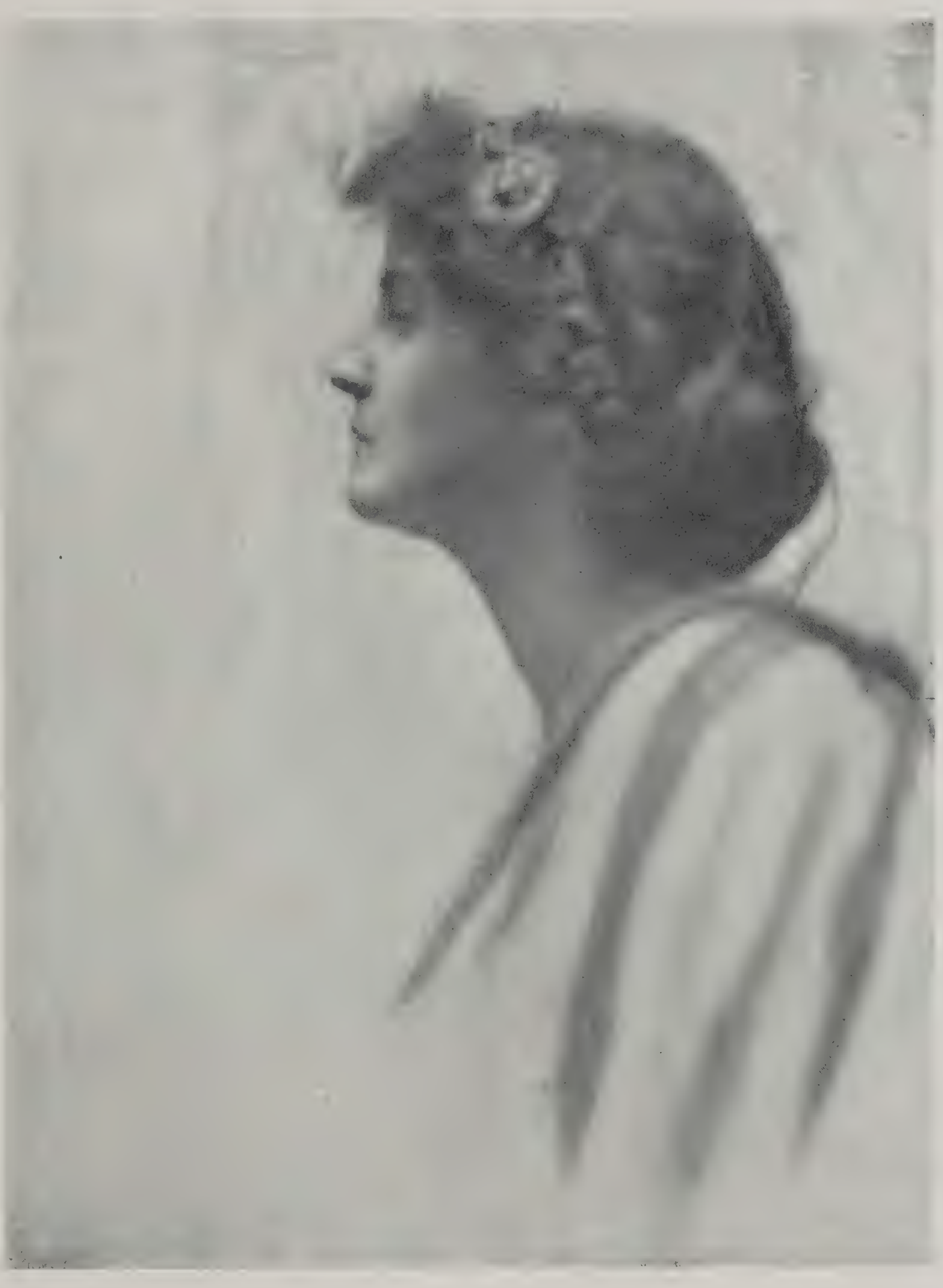
Carl E. Semon, of Cleveland Ohio, in his "Marsh Willows," showed clever treatment of a landscape, containing an edge of water with a rolling bank and scattered trees at the right of the picture. The picture was chiefly a foreground study, and seemed somewhat lacking in one well defined point of interest.

Carl Werntz and S. L. Willard exhibited jointly "An Apache Scout" and "Apache Indian Girl." These pictures were printed in red gum, a very appropriate use to make of red gum, and the pictures formed interesting decorative spots on the wall. The great number of Indian pictures which have been exhibited of late in all kinds of medium, detracts much from the originality of conception which always adds another feature of interest to pictures made for exhibition purposes.

The work of Osborne I. Yellott, of Towson, Md., was fully up to the standard of his work exhibited in former years. Mr. Yellott seems

RAVVY AND CADDY.

CURTIS BELL, Chicago Salon.



"STUDY."

By Virginia M. Prall, Chicago Salon.

to possess the happy faculty of selection strongly developed. His pictures are always notable for some strong point of interest, and while his technical skill is all that could be desired there is something about his pictures in artistic interpretation which leads one away from the technical side to the art side of his composition.

Amelia Van Buren, in her picture entitled "Reading Omar Khayyam," has shown her ability to handle the subject with a fine appreciation of the proper massing of the light and shade. The girl reading is carefully posed and the picture is soft in its tonal qualities, the high-lights are not so contrasting as to form discordant tones, and the decorative frame seems quite in keeping with the subject.

J. M. Tallman, of New York, exhibited an interesting picture of a dog, a fine specimen of the collie type. The print was made on what seemed to be Jacoby Platinum paper, and the tones of the print seemed to be appropriate in color for this particular subject.

Frederick K. Lawrence, one of the members of the Chicago Society of Amateur Photographers, in his "A Wet Snow, Michigan Ave.," succeeded in a good arrangement of his subject, which includes the Art Institute, in his composition. Aside from the pleasing lines of the composition the picture contained a fine sensation of atmosphere and the tone qualities were quite in keeping with the season of the year presented in his subject.

J. M. W. Pratt, of Milwaukee, exhibited one picture, "Young Holland," a work exceedingly well done, but somewhat suggestive of the influence of some of the studies of Holbein, although the type of model may have had more to do with the impression than the manner of interpretation.

Mrs. Jeanne E. Bennett, of Baltimore, in her picture entitled "Helen," has given us a charming portrait of a child, handled with a rare recognition of the requisites of portrait work. The brush-developed platinum print has just that right quality of diffusion, that presentation of the more interesting portions, the avoidance of strong lines in the wrong place, and the aid of the interesting face of the model which have all assisted in making this a picture of much poetic feeling. Her "Dutch Kitchen," a pleasing genre study, was also handled with great skill, and the modeling of the figures who are at work preparing vegetables is something beyond what one expects to accomplish with the camera.

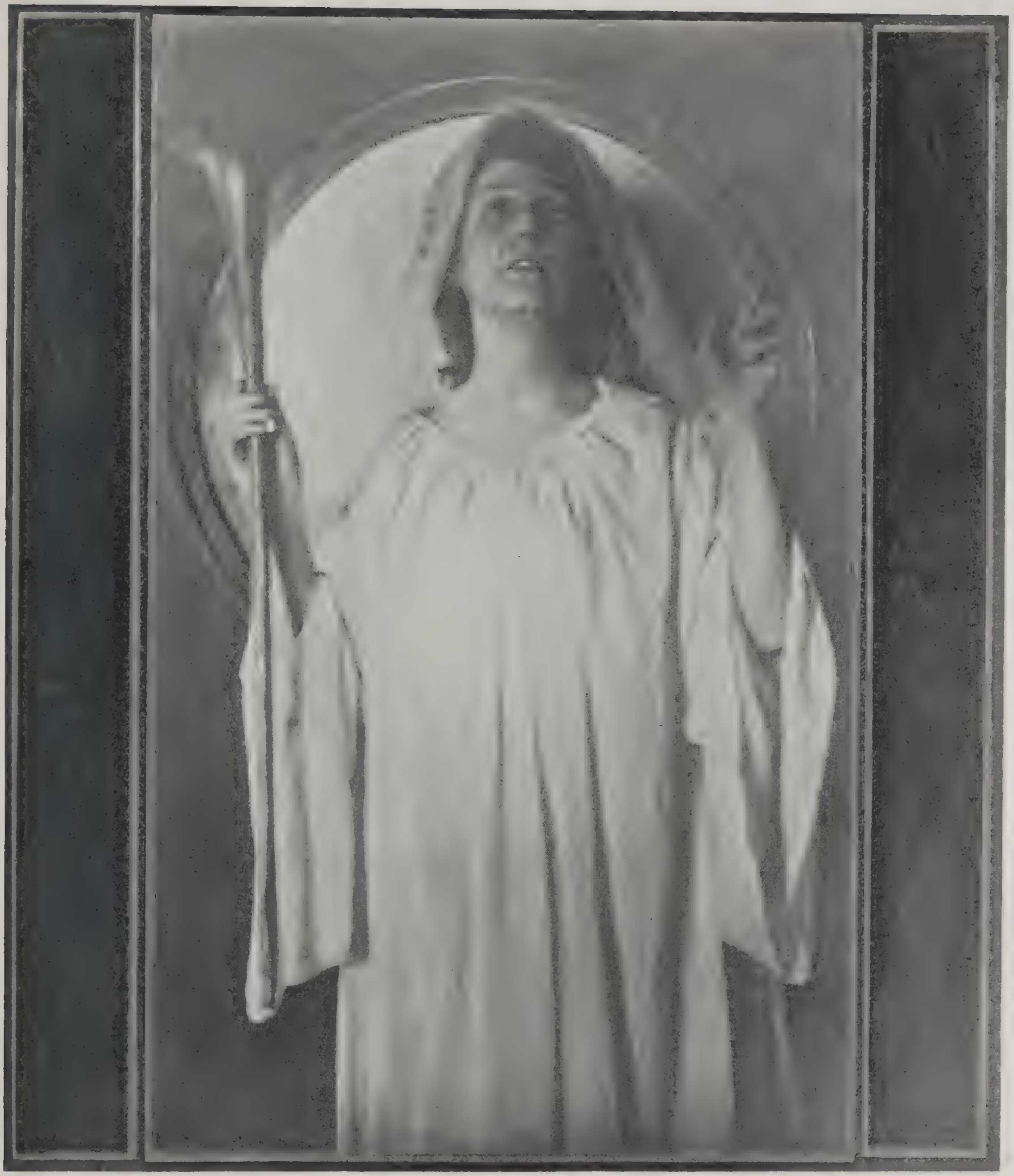
George A. Blackman, of Chicago, exhibited one picture "The Young Violin-maker." The figure at work is well posed and the technical qualities are remarkable. The presence of the long string of violins hanging on the wall furnished more objects than are needed for a picture of this class and the tendency was somewhat toward weakening the composition.

Frank E. Marks, of Camden, N. J., in his one picture, "Evening Meadows," suggests the possibility of selection of fine pictorial qualities from a subject which viewed in nature would seem rather meager in attractiveness. The picture is one with exceedingly simple, commonplace objects included in the composition, but the artistic manner in which it has been presented gives more than ordinary value in an exhibition of this kind.

E. F. Oyster, of Chicago, exhibited "The Lady and the Mirror," a full length study of a female model with a very small mirror hanging on the wall. The drapery falls in pleasing lines, the mirror fills a space where it is much needed, and the whole composition impresses one for its good action and the utter lack of attempting anything like an ambitious composition.

Virginia M. Prall, of Washington, D. C., who has exhibited in all of the Chicago salons, is represented in this salon with three pictures which show a rare individuality in treatment and in the subjects presented. While all of her work is

SUNRISE ON THE OCEAN. By Osborne I. Yellott.



"GLORIA IN EXCELSIS." By VIRGINIA M. PRALL.

DUTCH KITCHEN. Mrs. Jeanne E. Bennett, Chicago Salon.

well worth description, her "Gloria in Excelsis" is at the same time one of the most ambitious and the most successful pictures in the exhibition. The grace of the model, the deft arrangement, the deep devotional feeling of the work, the clever suggestion of action, combine in this picture to an extent rarely found except in some great mural painting by a great master.

Herbert F. Smith, of Syracuse, N. Y., in his one picture, "Marsh and Meadow," has selected a theme of simple nature, and has treated it with so much skill that we are led to notice that simple stories of nature's beauty well told appeal much stronger to the artistic sense than elaborate compositions in which the mind wanders over the abundant material vainly attempting to find the leading thought of the artist.

E. M. Blaine, in his picture, the landscape study entitled "A Rift in the Clouds," has grasped with a firm hand the necessary idea of making a strong picture out of a simple windmill by combining it with a sky and foreground well balanced. This picture was one of the strong landscape pictures of the exhibition, with such carrying power that it could easily be seen from all parts of the exhibition room. Space will not permit reference to all of the good pictures in this exhibition with any degree of satisfaction. It would seem, however, that without reference to the excellent portrait work of William B. Dyer, the landscape work of S. L. Willard, and particularly to that best example of his work, "Lotus Eater," and to neglect some reference to the landscape work of J. H. Field, of Berlin, Wis., who, although a portrait photographer, is in every sense an artistic interpreter of nature; to pass without mentioning the sweet child studies of Monteverde, Hodgins, Mrs. Sharp, Miss Eddy; and, in fact, to fail to mention many other exhibitors by name is leaving the subject with but scanty consideration. With congratulations to all of the exhibitors, I will leave the story of the Third Chicago Salon, regretting that the Era readers were not all permitted to see the salon, instead of visiting it through the insufficient medium of a brief article.

Animal Photography as an Amusement

ERNEST HAROLD BAYNES

PORTRAIT OF E. H. BAYNES.

By W. H. PARTRIDGE.

THERE are few men to whom I would recommend animal photography as a profession, but very many to whom I would strongly recommend it as an amusement. If it be taken up as a profession, the making of money must, in most cases, be the first consideration, and not to make it means failure. The professional, in his eagerness to turn animals into photographs, and the photographs into cash, is apt to miss the pleasures which can be caught by the cooler amateur who is in the game chiefly for health, knowledge, and amusement. The former must get a picture, get it quickly, and sell it for more than it cost him, or his work, in one very important respect, is a failure. The latter may take his time, get a wealth of exercise and fresh air, a knowledge of nature and amusing incidents to be laughed over in future years, and — well, if he gets the picture, too, so much the better.

Animal photography is, in some respects, like hunting; the real sport in each consists in the exhilaration, the excitement, the delightful thoughts and associations incident to a tramp in pursuit of an interesting and elusive object. The final act of pressing the button or the trigger counts for comparatively little. Whether the picture is good or bad, whether the game escapes or is killed, the true sportsman has attained his chief object; and the man who counts that day lost on which he fails to bag his game, either with the gun or camera, is no sportsman at all.

Not long ago I was out with a naturalist who was extremely anxious to obtain a photograph of an immense hawk whose nest we had discovered in the top of a tall chestnut-tree. After waiting about for some hours we discovered one of the hawks perched on a near-by tree at no great height, calmly preening her feathers. My companion quickly and silently brought his long focus instrument to bear upon the bird, drew the slide, and was about to release the shutter, when the "sitter" calmly dropped from her perch, wheeled, and passed above us like a cloud.

"I'm awfully sorry, old fellow," I burst out, for I feared his disappointment was keen. But, with a laugh, he dropped the bulb and seizing his field glass, turned to follow the great hawk as it swept upward and away, with the lights and shadows playing upon its wings.

"Magnificent!" he exclaimed. "I'm sorry I missed getting the picture, but the sight of that bird repays me for all my trouble. I never before had so good a look at a wild hawk on the wing."

The man was a sportsman; where another would have bewailed his hard luck, and returned with a feeling of defeat and disappointment, this one was able to appreciate and enjoy the incidental pleasures, and his day was a success, in spite of the fact that the primary object of his tramp was unattained.

RACCOON IN THE SNOW. By E. H. BAYNES.

RACCOON. By E. H. Baynes.

Nevertheless, when one wants a picture of an animal, one wants it; and no amount of philosophy will quite take the place of the picture; therefore, I will supplement my philosophical remarks with brief accounts of some of my personal experiences, which I hope may prove instructive to such of my readers as know even less than I do of the mysteries of animal photography.

One bright afternoon last autumn I was loitering through a farmyard, with one eye aloft for the passing migrant birds, when I heard a slight rustling sound from the direction of a grape arbor, as though a chewink were scratching in the leaves. I turned, but instead of a bird I saw a newly made hole in the ground, and from the hole there flew jet after jet of sandy earth, which, falling upon some crisp leaves, produced the sound described above. In five minutes I was at home, and in five minutes more I was back in the farmyard, with a long-focus camera and everything to match. I set up the instrument as quietly as I could, but I probably made some noise, for the grizzled face of a woodchuck appeared for a moment at the entrance to the burrow, and was quickly withdrawn. I knew he would never show more than his nose while he knew I was there, so I covered the camera over with sprays from the grape-vine, and carrying over a shock of corn, lay down behind it, bulb in hand.

Through a little loop hole I could watch the burrow, and, after waiting perhaps half an hour, out came the grizzled head again. Its owner soon satisfied himself that all was safe, and crawling out, lay down to sun himself close to the door of his home. I waited until he was still, and then pressed the bulb, giving him a half second on a Cramer crown plate with a Goerz lens, series III, No. 4, stopped to F. 6. Afterwards, I made several more pictures of this woodchuck in different attitudes.

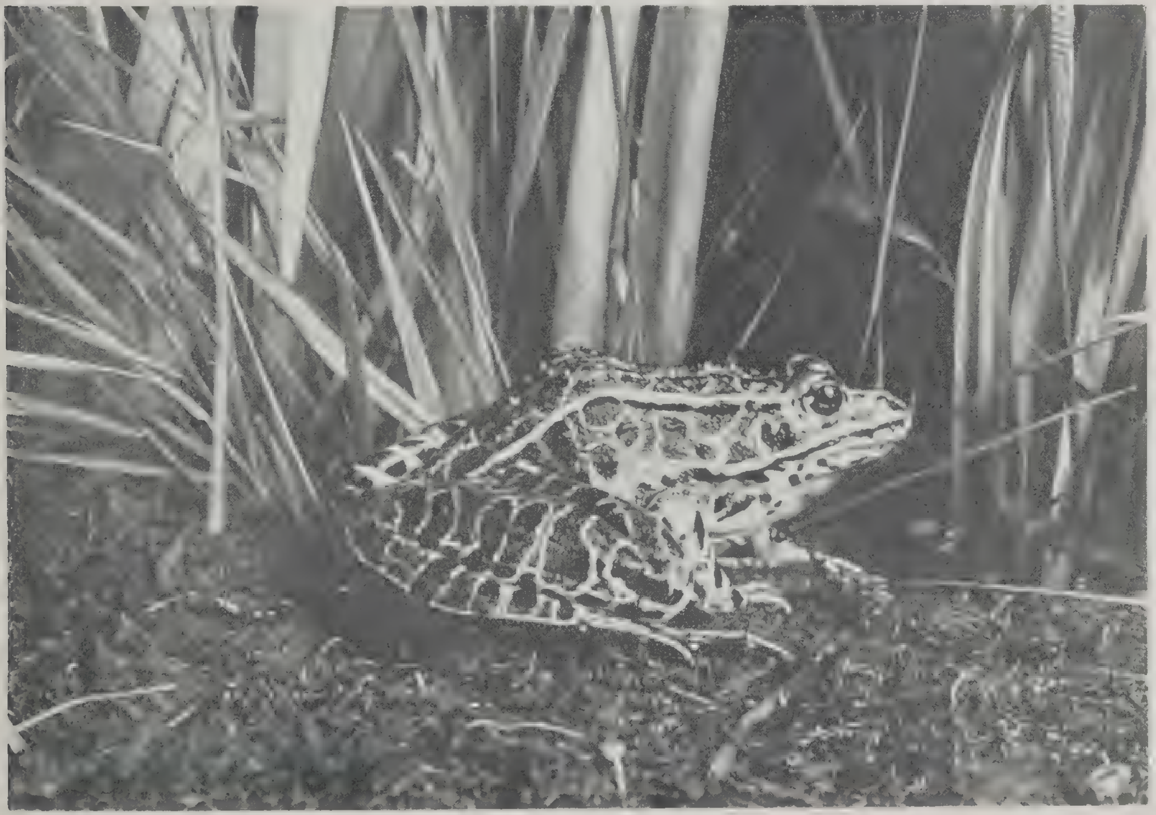
Among the most satisfactory subjects which I photographed last year, were the members of a family of young flying squirrels with whom I managed to make friends. At first when I visited the nest the mother would express her displeasure by carrying her babies away, one at a time, to some other hollow tree; but I persisted in my advances until she didn't seem to mind me very much. When the little fellows were well covered with fur I used to take them out and play with them, and give them cracked nuts, which they would eat on my shoulder or even in my hand. Sometimes I would set one on a branch or the top of a stump, and while he was busy with a nut I would take his photograph. Sometimes when the little squirrel finished his nuts before I was ready he took flying leaps, landing on the camera, and once even on my head. But as long as he had a nut he would remain anywhere I put him, assuming some graceful, natural position ; and, but for the movement of his jaws, I might have taken a time exposure of him.

One of the most amusing incidents connected with my camera work last year occurred while I was trying to photograph some frogs on the edge of a swamp. I was busy chasing a refractory leopard frog, who was bent on doing anything but having his picture taken, when along came a Frenchman with two ladies. The frog was extremely active and had eluded me two or three times when monsieur stepped up and kindly insisted upon helping me. He explained that he had had considerable experience in catching frogs in France, when he was a boy, and that if I would please allow him, he would show me how the trick should be done. I stepped back to take the promised lesson, and monsieur moved to the attack.

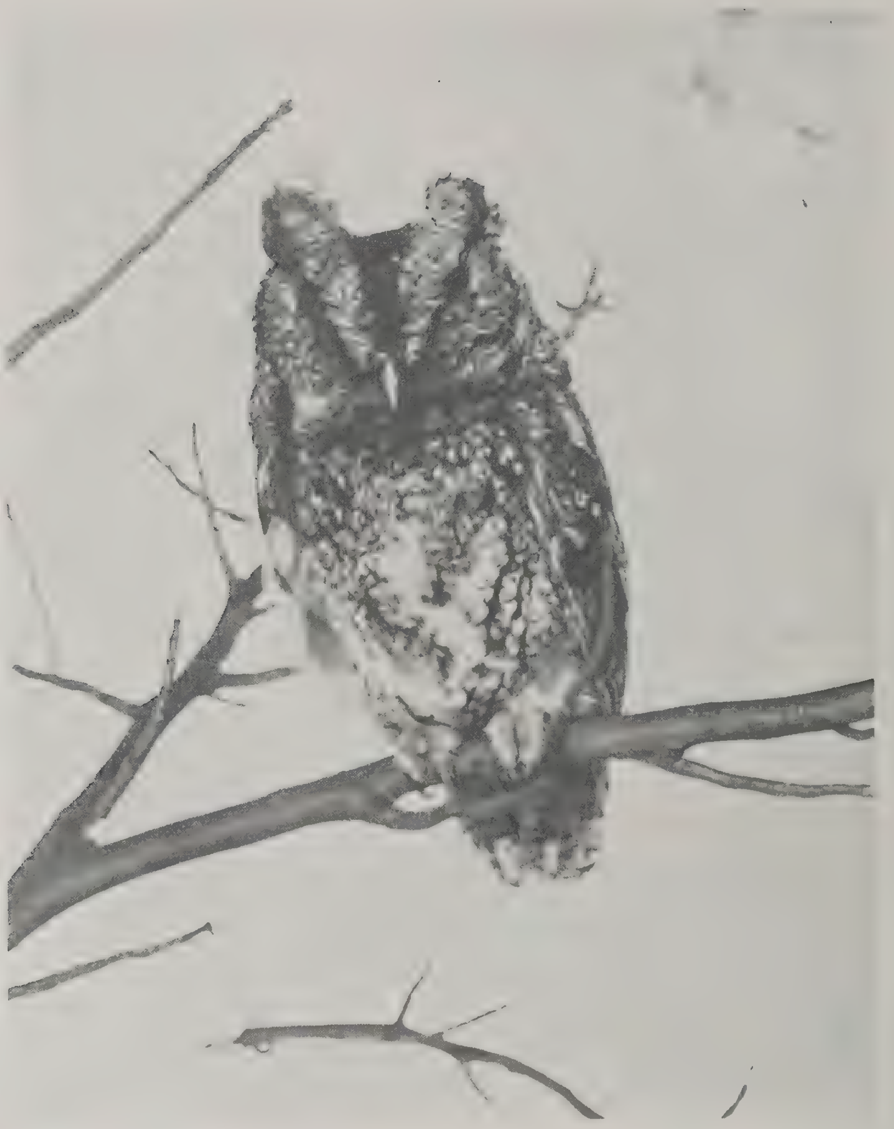
The frog was squatting calmly, in about a quarter of an inch of water, on the very verge of the quagmire, and the Frenchman approached gingerly in order to spare his patent leather shoes.

"You must advance ver quietly," said he, "that you do not mak eem run. Zen," he continued, "you fold your hand lak zees," looking at the ladies, "and zen," bending over the innocent frog, "you just take eem in your hand lak zees." At the last word he made a sudden forward movement, but, alas, it was many years since he was a boy, and his right hand had forgotten its cunning. The frog was just too quick for him, and to save his reputation he made a second wild grasp at the slippery hind legs as they shot through the air. In doing so his foot slipped, he lost his balance, and plunged head first,— high silk hat and all, — into the yielding ooze.

The ladies screamed and looked very much alarmed, but when I pulled their unlucky escort out by the heels, and they saw that he was alive, they turned towards a clump of alder bushes to hide their merriment. I think the frog must have laughed, too, if he got a glimpse of that ludicrous figure, with water dripping from every opening in his ruined clothing, and with muddy rivulets trickling down his face, from his sodden



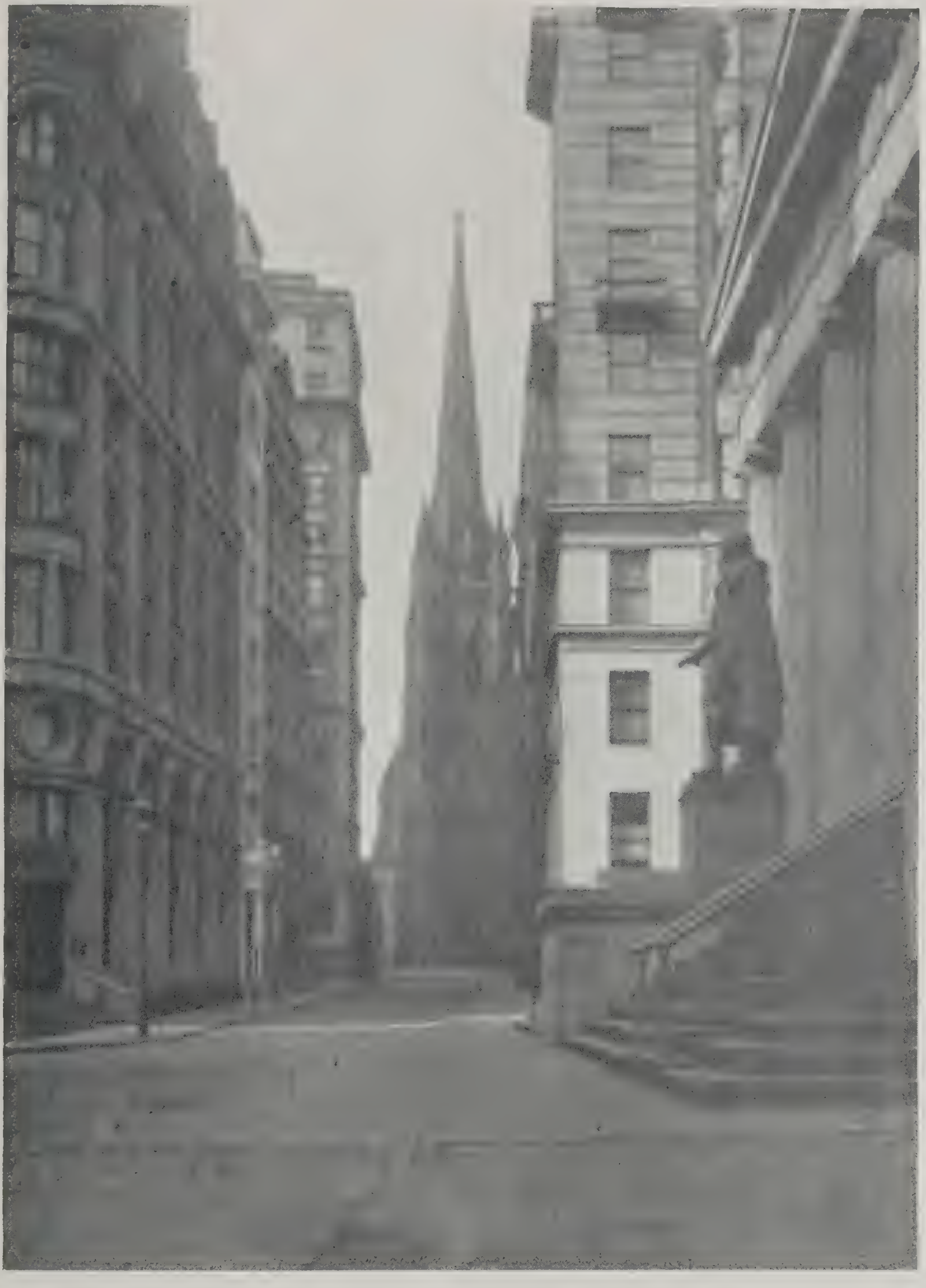
LEOPARD FROG. By E. H. BAYNES.



SCREECH-OWL, ASLEEP. By E. H. Baynes

hair. Fortunately my house was not far away, and a liberal dose of hot water helped matters considerably. Then, with a borrowed sweater and a soft cap, he went home, happy, and looking not so very much unlike a naturalist; his muddy shoes and trousers adding greatly to the "make up."

In bird photography I know of no subjects so entertaining as the hawks and owls. Modern classification to the contrary, they are the monarchs of the bird world; despotic monarchs, perhaps, but the monarchs none the less. It is hard work, at times, to get them within range of the camera, but when you once get a really good shot at one he makes a bird picture which you can see without the use of a microscope. In going through an old orchard, the other day, I was fortunate enough to find a screech owl asleep in a hollow apple-branch. On taking him out he first snapped his bill and ruffed his feathers angrily, and finding that that did no good he "shammed dead" and lay quite still in my hand. Afterwards he tried the aggressive and very solemnly proceeded to bite my hand. I took him into the next field and set him on the branch of a sapling where I could photograph him against the snow. He drew his feathers close to his body, closed his eyes, and sat so still that I stopped my lens down to F. 45, and gave him a time exposure of a full second.



WALL ST., NEW YORK, STATUE OF WASHINGTON (Needlehole picture). By J. H. McCorkle.

Needlehole Photography

BY J. H. MCCORKLE

NEEDLEHOLE PORTRAIT. By J. H. McCorkle.

It is not my purpose, in writing on the subject of Needlehole Photography, to go into the details of exposure tables. This subject was ably treated in *Photo Miniature* (Pinhole Photography); and by Dr. H. d'Arcy Power, in his series of articles in *Camera Craft*, (Oct., Nov., Dec., 1902).

By a comparison of the tables given in these two publications it will be readily seen that exposure in needlehole work is by no means a certain quantity.

In my own experiments I am free to state that I have taken, as the initial factor, the No. 10 needlehole and 4 in. focal length and instantaneous plate (Cramer Iso) as adopted by the writer of the article in the *Miniature*.

Dr. Power advocates the use of a No. 11 needlehole for general use ; but, as this necessitates a much longer exposure under similar conditions than a No. 10, and therefore increases the liability of vibrations in camera and tripod, and the resultant blur in the negative, I prefer the larger aperture.

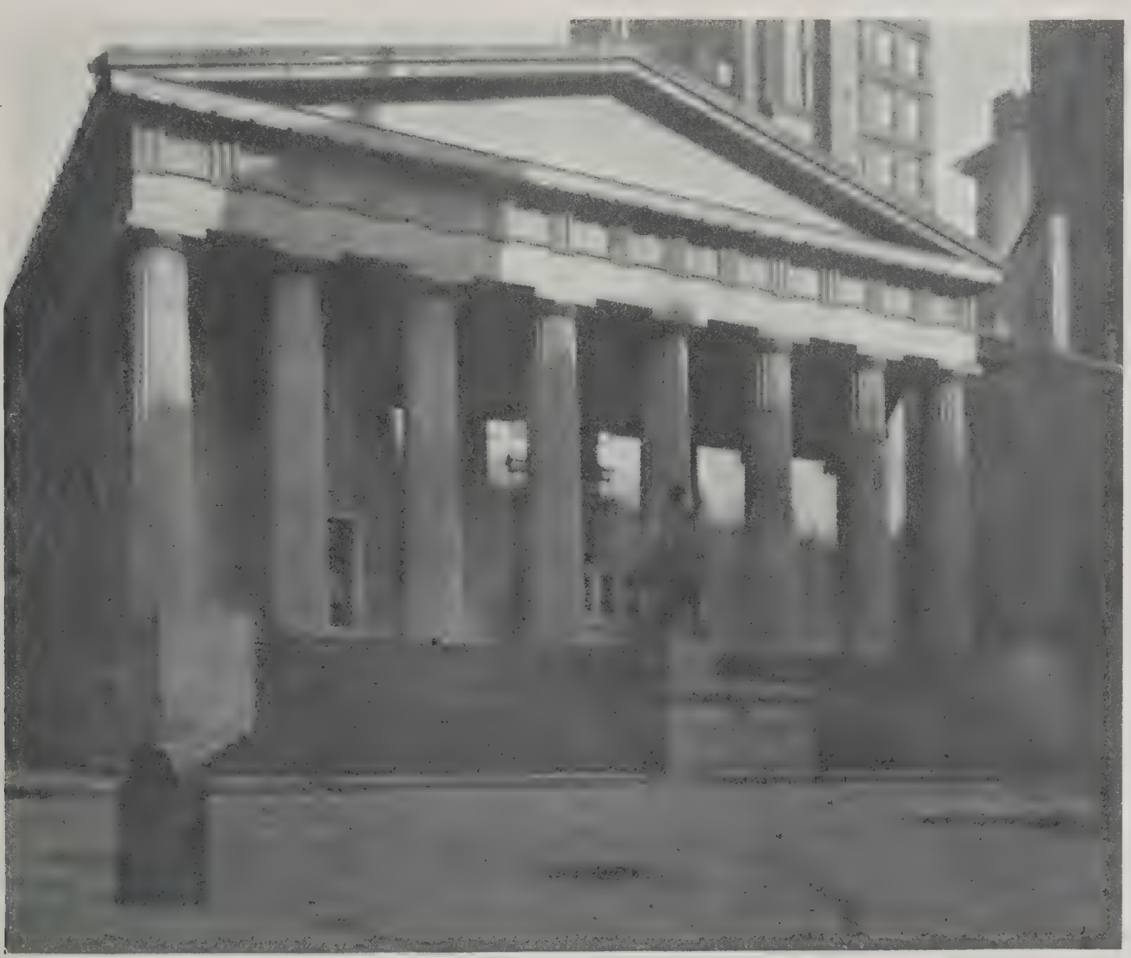
Considering the relative sizes of needleholes of No. 5, 8, 10, 11, and 12 being 32-1000, 23-1000, 17-1000, 15-1000, and 13-1000 inch respectively, it is readily seen that any increase in sharpness of No. 11 over No. 10 would be almost, if not quite, imperceptible; I therefore advise all beginners to adopt the No. 10 as the basis to figure on.

The focal length is purely optional and is governed by size of the object desired on the plate. It is perfectly feasible to cover a 6^2 x 8^2 plate, sharp to the edges, at 3 in. focal length, *but not desirable.*

At this short focus the needlehole becomes an excessively wide angle lens, and the perspective is too sharp to be pleasing. On a 4 x 5 plate I rarely use more than a 5 in. or 6 in. draw, but on a larger plate I have found 7 in. to 9 in. to give more pleasing results and the best perspective. The accompanying view of Trinity Church being at 8 in. on a 6^2 x 8^2 plate.

Various materials are advised by different authorities to use in making the shutter. After careful experiment I have found black fiberloid or celluloid of 1-50 in. thickness, to be by far the best. Either of these substances is opaque when scraped down to almost a tissue in thickness; and in perforating with the needles give a clean-edged hole, free from any reflection. Extreme care is necessary in making the holes; as, should the No. 12 needle work loose in the hole it would be found, on trying a No. 11, that it just fitted, and therefore was not a No. 12 hole. It is a good idea to make the hole with the next smaller sized needle and gradually work it to just a close fit for the size desired.

In *Photo Miniature,* No. 27, the claim is made that the needlehole negative shows results "absolutely rectilinear, under all conditions." This is decidedly misleading. The same rules apply, as to the plate being at right angles (straight up and down) to the ground, as when working with a lens; and a plate tilted forward or backward will show diverging or converging lines in the negative. As the needlehole image is, in focus, at whatever extension is used care must be taken in raising the front board, for, if carried too high, the resulting picture, while all in focus, will be distorted, owing to the different



THE N. Y. SUBTREASURY, WITH STATUE OF WASHINGTON. (Needlehole Picture.) By J. H. McCorkle focal lengths on various parts of the plate. Rather than raise the front board so much I use a larger plate and only print such part of the resulting negative as I desire.

In an article, by Mr. Yellott, which appeared in *Camera Notes*, he expresses a decided fondness for pictures made with the needlehole — claiming for them that they are the only ones we can hang in our rooms and "live at peace with." He claims that he can only stand for a limited time his prints from negatives made with a lens.

While Mr. Yellott is, perhaps, all right in his theory, I think, in the long run, he will find a judicious assortment more pleasing. The sharpness complained of in the lens work is a necessity in certain scenes; while the atmosphere and perfect harmony of the successful needlehole print is a pleasing change.

ALONG THE DOCKS. By J. H. McCorkle.

Nearly every photographic journal of prominence is devoting more or less space to articles on needlehole work, and by a careful comparison of the data given, I have come to the conclusion that the novice had better select one authority and stick to the table of exposures given, until he can, from his own personal experience, make such modifications as appear necessary.

Mr. Yellott, working with a pinhole (of unknown size) makes a cloud negative at 3 in. in one third (?) second; while with a No. 8 needlehole and 4 in. focal length, four seconds is my best time.

The illustrations accompanying this article each tell their own story, and while a comparison would seem to be very confusing, as to relative times of exposure, and focal lengths, yet, when the light is considered, they all work in on the general rules I have worked out from the scale set forth in the *Miniature*. Should I add these rules to the ones already published by Dr. Power and Mr. Yellott, in *Camera Craft* and *Photo Miniature*, it would only add one more source of confusion to the already widely different tables.

Owing to the difficulty in boring the holes exact, it is best to work up a scale from the shutter in use and, once becoming familiar with it, as with a lens, troubles begin to diminish.

The freedom from halation along the tops of buildings, or in the tops of trees, is a pleasing feature of this class of work; but where taking an interior, towards a window, a backed plate is necessary.

Given a view where time is not a factor, the needlehole is the finest of telephoto lenses, as the

THE LUMBER-YARD. (Needlehole Picture.) By J. H. McCorkle.

magnification increases amazingly with the focal length, and there is no limit to this, up to 26 in. or 28 in. Beyond that I have never tried it.

For portraiture the needlehole is not "A howling success," but we must not blame the needlehole but our subject. Few persons have the repose of manner and disposition to stand an exposure of from 100 to 200 seconds, as is necessary on indoor work; and it must be a quiet day outdoors, when a picture can be taken without the wind moving the hair during exposure.

The "Lady Sewing" was taken near a window; 100 seconds' exposure and 5 inch focal length, and the subject absolutely refuses to go through the ordeal again.

Just a word, before closing, about the box to use. It is unnecessary to have a special camera. I use two, a 4 x 5 and 6 x 8 Poco, to which I have fitted front boards to carry my needhole shutters. Lately I have used a Century camera and have found the dropping front of the box a decided advantage for short focus work and the long extension (29 in.) what I needed for long focus work.

Use the best of plates and isochromatic or orthochromatic where possible. Cramer's instantaneous double coated isochromatic have given me the best results.

My advice is, do not study and puzzle over tables too much, but take your camera and needlehole out and let them get acquainted with each other.

Photography as Applied to Illustration and Printing

[Abstract of Cantor Lecture delivered at the Society of Arts, London]

J. H. GEDDES

TRICHROMATIC photograpy and three-color printing is the latest and by far the most important development of photography in the whole range of processes of illustration invented or evolved during the past half century, and it is a subject that I approach with some diffidence. It has been dealt with in this historic hall on several occasions by giants in the world of modern research, men who have devoted years of investigation to every theory and every detail. I hope that it will not be considered presumption in me to attempt to raise my voice on such a matter and in such a place. I am invited to place before you my version of these processes, and I will to the best of my ability endeavor to explain the principles and working of the three-color process from the practical point of view of a worker, but I will not try to put before you or to make you understand the formidable theories surrounding and enveloping the whole question of color analysis, of Fraunhofer lines, molecular swings, the undulating theory of light, or the like; not that I, for a moment, wish you to understand in this art or science of the photographing of colors that theory goes for little, or that practice is everything; without theory the process as it now stands would be a vain thing, and we workers have no other feeling than gratitude towards those patient investigators who have found out and established rules and measurements for every operation, the exact spectrum colors to be used, the proper methods of sensitizing plates, the relationship between spectrum colors and pigments, the tabulating of exposures for each color and light condition. In almost every problem which may be presented to the experimentalist or workman, all these things are recorded, and are to him who reads, power.

Having stated this much, I must explain that the general principles upon which trichromatic or three-color photography is based are as follows: It is an accepted theory in the case of every object in nature or art exhibiting color in any form or combination, that color or colors result from the three primary colors which form white light, alone or in combination. These primaries I may name roughly, red, blue, and yellow. (Mr. Symonds will now, by means of the photo-spectroscope, make a photograph before you of the spectrum of a beam of light given by the electric arc; the little experiment will be instructive in two ways: it will enable you to see the spectrum on the focussing screen of the camera, and the result of the photograph will show the effect of the different colors and their color values on the photographic plate.) I may as well say at once that the three colors named now as the primaries are not scientifically red, blue, and yellow; they are, to be more exact, red, green, and purple violet; but these latter spectrum colors cannot be employed successfully in the form of pigments in the printing-press, and as that is the principal object in view in this paper, it will simplify matters if I speak of these primaries all through as red, blue, and yellow. It is known to all of us that the white light of daylight or the sun is composed of, and is the result of a combination of, colored light; analysis by the spectroscope shows it to be composed of all the colors of the rainbow, yet all these colors may be reduced to three, the ones I have roughly named, red, blue, and yellow. If three glasses are coated with films of the three primary colors, and by means of a triple lantern are projected on a white screen, the three discs, on being superimposed, will produce white light — that is to say, the three separate colors projected one over the other will give us pure white. It is interesting to note, and necessary to remember, that the same colors in the form of a pigment or ink, superimposed or printed over each other on paper, form not white, but black.

The principles of these interesting phenomena of light were laid down in 1861 by Clerk-Maxwell, and they have been elaborated since by many investigators. A French scientist named Ducos du Hauron early applied the principle to photography, and since his day we have had Ives, of Philadelphia, Vogel, of Berlin, Lippmann, of Paris, Wood, in America, and in this country, Abney, Joly, Sanger Shepherd, and many others.

Having established the principle that all combinations of pigmental color in, say, for instance, a painting, are formed out of the three primary colors, the next step for the photographer is to obtain negatives from the painting, which, so to speak, automatically dissect out from the original each separate color mentioned, and so make three distinct photographic records of the reds, blues, and yellows entering into the composition of the subject. This result has been attained by the employment of plates which are so sensitized as to be affected specially by two only out of the three primary colors. The action is controlled in photography by the use of what are known as light filters, which are transparent screens of colored pigment, placed before or behind the lens, which admit at will any two of the three primary colors to the sensitive plate, and absorb the other one. The rationale of the process may be described thus: — The negative used for printing the red color sensation is made to see yellow and blue combinations, and is color blind or insensitive to red and its combinations. The blue plate sees reds and yellows only and their combinations, and is color blind to the violets, and the yellow negative sees red and blue only, and is color blind to yellow. Having obtained these negative records of the color analysis of the subject, and, supposing the exposures are correct, and the color value in each properly balanced, it only remains to convert the three photographs so obtained into printing surfaces by any process rendering half-tones, say collotype or half-tone blocks, and from this printing surface to reproduce the separate colors impressed in printing ink in their own colors on paper. The block representing the yellow is printed first in yellow ink; over this picture is accurately registered the block representing the red, and printed in red ink; and finally the block representing the blue is printed over the yellow and red impression with blue ink; the result will be found closely to approximate to the original in all its colors and combinations of color, from the palest tints to solid black.

This, shortly stated, is the whole process of trichromatic reproduction. I will now try to explain in a little more detail how these results are arrived at. The process is yet young, and though the theory is perfect, the practice is not altogether so. Many difficulties have to be contended with, amongst which, I may mention that we have yet to discover plates and sensitizers which will respond accurately to the spectrum curves laid down for each color sensation. We have also still to find light filters which will effectually stop the action of light rays which are not wanted. Then the interposition of the grained screen required for the production of a surface-printing block degrades and flattens the gradations for the picture, rendering skilled artistic aid necessary in the etching of the plate. The selection of standard printing-ink colors is a further element of trouble, because inks of great purity and brilliance are necessary, and it would seem as if pigments of the requisite quality are difficult to obtain, unless more or less fugitive colors are employed. There is hope in this direction, however, and our best ink makers are making laudable efforts not only to supply a reliable standard, but are gradually nearing the ideal as regards purity and permanence of color.

I have stated that the plates used for trichromatic photography must be specially treated, so that they may be more or less sensitive to light from different sections of the spectrum. Ordinary plates sensitized with bromide of silver are affected principally by the blue violet rays, and a great deal of patient research has been devoted to the finding of substances which will control and vary this action so that other rays may exert an equal reducing influence on the salts of silver. It has been found that certain dyes added to the collodion or emulsion have a controlling influence in the required direction, and this idea has been followed up until there are now a number of color sensitizers and color sensitive plates on the market, prepared on scientific principles, and answering most requirements. As just mentioned, ordinary untreated photographic plates are most

IN WINTER'S GRASP. By H. C. Robinson. Photo Era 1902 Contest.

Taken at 11 A. M. in a fair light, with Turner-Reich Lens. Stop F : 15.
Exposure one-quarter of a second, with medium Iso. plate and screen.

sensitive to the blues and violets of the spectrum. A solution of erythrosine dye renders the plate sensitive to green and yellow, and a solution of cyanine dye alters the range of sensitiveness through the orange up to the red. The spectrum plates made by Messrs. Cadett and Neall and the orthochromatic plates prepared by M. Lumiere, also the collodion emulsions supplied by Messrs. Penrose and Dr. Albert, are all excellent for the purpose of trichromatic photography, and it is not now so necessary for the experimentalist to sensitize his own plates, as was the case some few years ago.

The light filters for making the separate color negative may be in two forms, liquid or dry. The liquid or wet filters are made of dyes in solution held in tanks or cells of optically flat glass. Dry filters are made of similar dye in a solution of gelatin or collodion, with which optically worked glasses are coated, dried, and sealed with a cover glass to prevent injury. The latter are found most convenient for working, though it is held by some experts that superior results are given by the wet filters. The dyes and pigments used for making light filters are numerous, and no particular standard has yet been settled ; each plate manufacturer and operator recommends or adopts some modification which suits his particular working, and in their hands the end seems to justify the means. In my experience, I have found that dyed collodion filters, if carefully made, answer every purpose.

A collodion is made containing five or six grains of pyroxyline to the ounce of mixed alcohol and ether, and the dyes are dissolved in alcohol, and are added to the collodion until the solution is deemed of sufficient strength for coating the plates. Dyes that will not dissolve in alcohol are dissolved in water, and the glass plates, coated with plain collodion and washed, are dipped in a bath of the aqueous dye until the film of collodion is saturated with the requisite strength of color. It is generally necessary to coat two separate glasses for each color filter, and to cement the two together face to face with Canada balsam. Sometimes colored glass is used in combination with dyes, but there is no particular advantage in doing so, because the dyed films are less liable to interfere with the action of the lens than glasses which are colored right through. In practice for three-color block printing, the filters are varied in the colors and strengths, so as to adapt them to the particular standard of printing-ink used for printing the blocks.

The following dyes or their equivalents form a basis for most filters for three-color work : —

For the red printing negative	2	Brilliant yellow.
	1	Brilliant green.
For the blue printing negative	1	Cochineal red.
	2	Brilliant yellow.
For the yellow printing negative	2	Napthol green.
	1	Methyl violet.

Glasses are coated with each of these colors, and cemented together in pairs in the order given. One color usually predominates over the other ; for example, the green used in the red record is the dominant color, and the red used in the blue record dominates the yellow.

The sensitive plates used with these light filters may be either collodion emulsion or gelatin dry plates, modified, as I have already stated, in their scale of color sensitiveness so as to be specially active to only two of the primary colors in each case.

The plate for use with the "green-yellow" screen must be sensitive particularly to the green and yellow rays, and not at all to the reds, which are not required in this record. The plate for the "red-yellow" screen must only be active to those rays and not to the blues, whilst the plate for the "violet" screen must see blue and red, and be color blind to the yellows.

I have mentioned that there are several excellent grades of commercial plates available, which fulfil with fair accuracy the theoretical conditions just named, as regards color and sensitiveness. They are all carefully made, and, provided they are not stale, the operator is safe with almost any of the makes — Cadett's, Lumiere's, Ilford Chromatic, or Edwards', or collodion emulsion may be substituted if the dark-room conditions are complied with.

I do not propose to go through the operations of photographing, more than to say that, in addition to the precautions ordinarily taken with rapid dry-plate work, there are others to be observed in consequence of dealing with plates which will instantly fog if exposed to the rays of the customary ruby dark-room lamp. Only the faintest red light must be used for the red and yellow printing plates, whilst for the development of the blue plate a green light must be used, and very little of that. The best means of all is to develop in the dark, first carefully working out the exposures and developing time by Hurter and Driffield's tables of factors. I would also commend Sir W. Abney's color sensitometer to those who are testing or working plates and screens of unknown quantity. It is a *sine qua non* that the development of three-color plates should be exactly right ; intensifying and reduction afterwards may be resorted to to correct under or over development, but this course is never quite satisfactory ; the proper balance of color value is disturbed, and troublesome corrections may be necessary before the printing-plates are deemed satisfactory.

It is, of course, one thing to prepare plates and color filters which will work accurately with spectrum colors, but it is another matter to deal with the reproduction of objects or pictures containing compound colors (sometimes two or three painted over one another). In the case of water-color drawings it is frequently puzzlingly difficult to account for the apparently false effects given in the color negatives, though photographed under conditions which seem perfect ; but a little consideration shows how possible it is for errors in color value to be recorded. White light is always present in photographing any object, and it is reflected in a greater or less degree from every color ; there is also the paper or canvas on which the drawing is made, giving out white light in proportion to the

"AS EVENING DRAWS NIGH." By WM. H. WHITEHEAD, Photo Era 1902 Contest.
Taken at 4.15 P. M., in a bright light, with Bausch & Lomb Lens, Stop 8.
Exposure one twenty-fifth of a second, on a Cramer Iso. Inst. plate.

strength or weakness of the wash or color upon it; this agency will always cause a disturbance of color values, and has to be reckoned with in the most perfect process of color reproduction. So that, save in exceptional cases, you will understand why it is necessary to aid the color plates by careful retouching and etching. This artistic assistance applies more particularly to the preparation of blocks for the printing-press.

The camera for three-color photography should be constructed with a view to the greatest rigidity and fixed to a solid stand, which, when in position, can be securely fastened down to the floor of the studio. The lens must be of the most rapid type, and for direct working on plates through a half-tone screen will require a prism attachment to reverse the image. The color filter may be behind or in front of the lens combination; in front is most convenient, and a simple slide arrangement attached to the hood of the lens or prism is all that is needful.

Having succeeded in making a set of trichromatic negatives, the next important step is to obtain prints from them on paper or glass in the proper colors, and to superimpose one over the other, in order that the reproduction of the subject photographed may be complete. Happily, it is not necessary for the amateur or experimentalist to have a photo-engraving installation to attain this desirable result, and we have to thank Mr. E. Sanger Shepherd and M. Lumiere for having devised methods of printing from three-color negatives on their films of sensitized gelatin, which are afterwards dyed with the primary colors. When these films are dried and cemented together (the whole process, I may say, is at once simple and ingenious), the finished results are in every way interesting and charming. The processes are within the reach of any one possessed of true photographic patience.

The process of translating three-color negatives into blocks for the printing-press, and the subsequent production of copies of the subject in colors on paper, is already a scientific industry both in this country and abroad, and it marks a new epoch in artistic illustration. There are two methods in vogue for the making of color blocks from the negative records. The first is called the "indirect" process, and differs from the "direct" process, in that the color negatives are made without the interposition of the mechanical screen grating, consequently transparencies on glass must first be make of the three separate negatives. From these transparencies negatives with the indispensable grain are made, and are printed on copper or zinc for etching in the ordinary way.

In the "direct" process the original color negative has the half-tone screen placed in position before it during the exposure, and the result is a grained negative, which can be printed direct on metal, without going through the operation of preparing transparencies and grained negatives from them. The advantage of the "direct" method is a saving of two operations, and the disadvantage is the increased exposure caused by the interposition of the screen grating.

It is necessary to explain that the mechanical ruled screen can not be used at the same angle for all the plates. The usual angle is forty-five degrees for an ordinary block by the half-tone process, but if all three negatives were printed with the grating at the same angle, two disagreeable things would occur. First, the colors of the three separate printings would be, so to speak, entangled; one dot of color would be printed over the top of the other, and would be lost (to get the color-value in the tones of a picture in dots it is essential that the spots of color should be side by side, and not superimposed); second, there would be a curious *moire antique* pattern introduced by interference, which would utterly spoil the picture. These troubles are avoided by arranging the angles of the screen grating each about thirty degrees to the other, one at fifteen degrees, another at forty-five degrees, and the third at seventy-five degrees.

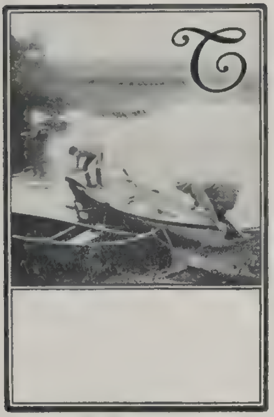
The negatives are printed on copper in enameline, and etched in relief by the half-tone block process already explained. The etching of the plates is carried out by artists who not only know how to deal with the mechanical portions of the work, but have a knowledge of color and color values, and on their skill and knowledge much depends as to the ultimate success of the reproduction.

The printing of the blocks is carried out in the ordinary printing-press, and the plates are treated in all respects as the usual type block, but it is requisite that the printing-press used for this purpose should be of the very best construction, and capable of being made to register one printing over the other with the utmost accuracy. The block for the yellow printing is first arranged in the press, and impressions are taken in yellow ink on paper having a fine texture and surface. The red printing-block is next fixed in the same position in the press as was occupied by the yellow, and is inked with red ink. The impression is made over the previously printed yellow, and is registered, so that it fits exactly over every part of the yellow picture, the result being an impression containing all the yellows and reds of the original. The blue printing plate is next placed in position in the press, and the same precautions observed as to the registering. After inking the plate with blue ink, the impression is pulled over the two printings in yellow and red already made, and the result is the complete picture containing every shade of color of the original, no matter whether the original is from nature, a painting, or water-color.

IN PASTURE. By WM. H. WHITEHEAD, Photo Era 1902 Contest.

Taken at 10 A. M., in hazy light. Bausch & Lomb Lens, Stop 16. In one twenty-fifth of a second, on a Cramer Iso. Inst. plate.

Photography in Advertising



THERE is an old saying that "the camera never lies." It depicts people, places, and things as they are, and by doing so it tells a story that is sincere and convincing. This is one of the reasons for the present important position held by the camera in the production of advertising designs. Many advertisers realize that this method of illustrating their announcements has advantages worth considering, and the result is evident in the magazines where photographic reproductions of articles and scenes showing their uses are numerous and conspicuous. And it is a fact that more photographs are now being used for purposes of publicity than ever before.

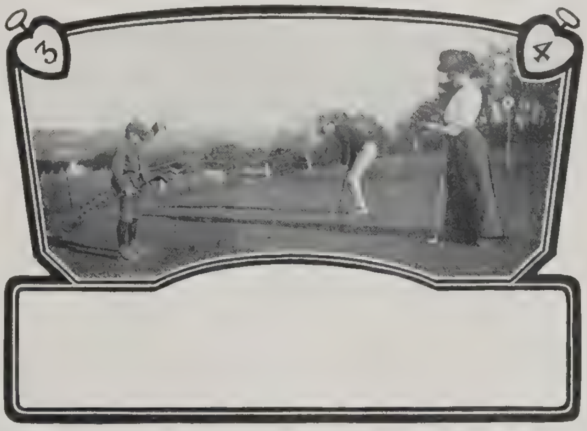
There is scarcely an article on the market that is not a good subject for a camera design. The only thing necessary is to place the matter in the hands of the right man, and, after he has studied the article and learned its characteristics and uses, he will train his lens on it with profit-bringing results. He will bring forth from the recesses of the dark room a picture that not only actually illustrates the goods, but which is at the same time pleasing, and possesses qualities sometimes artistic, sometimes simply striking, but always effective.

It must not be supposed, however, that the use of the camera does away with the services of the artist of the pen and brush. On the contrary, there is an intimate relationship between the two that cannot be ignored. The camera merely takes the picture. It remains for the artist to embellish it, to add the little touches that enhance its beauty, to give it the greatest possible value from the advertiser's standpoint. The fact is, that most of the best photographic designs are made by artists who have kept abreast of the times by becoming expert in the use of the camera. They appreciate the possibilities of photography in commercial work, and by intelligent study have been largely instrumental in developing the art of camera designing.

Notwithstanding the growth of the demand for this class of work, there is still a lack of photographic designers who have original ideas. There are a few, however, and their productions are seen in any magazine one may chance to pick up.

The good advertising photographer must have the ability to perfect the composition of his picture with material from real life, and be capable of calling forth the proper thing in pose and expression, thus securing the best effects.

With this article is shown a number of photographic advertisements designed especially for *Profitable Advertising*, by Samuel L. Busha. Mr. Busha is a young man who has met with much success as an artist, having designed covers for some of the leading publications of the country and advertisements for many of the largest advertisers.



Suggestion for Golf Goods Advertisement. Photographed and designed especially for *Profitable Advertising* by Samuel L. Busha, and protected by the general copyright.

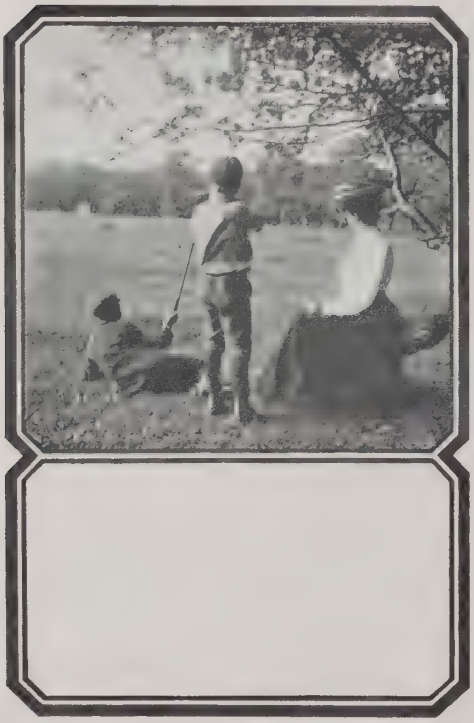
He was formerly associated with Will Bradley. Some time ago he took up the study of photography in its relation to advertising, with notable results, and at *P. A.'s* request he has supplied the accompanying original photographic designs.

In referring to the subject of photography in advertising, Mr. Busha recently made some very suggestive remarks:

"I consider that the elements essential to a good design are, first, *attraction*, and, second, *interest*," he said. "Without these elements no design will prove as successful as it should. The trouble is, that many advertisers fail to appreciate the value of an illustration, and think that any old picture will answer the purpose sufficiently well, when the fact is, that to produce the proper effect — an effect that will make the space used profitable to the user — the picture should be chosen with the greatest care and discrimination. If you will watch a person glancing through the advertising pages of a magazine, you will notice that he pauses in turning the leaves only when his eye has been caught by an attractive cut. This is the cue for the cut to get in its good work for the advertiser.

(*To be continued.*)

Suggestion for Revolver Advertisement. Photographed and designed especially for *Profitable Advertising*, by Samuel L. Busha, and protected by the general copyright.



Suggestion for Boys' Rifle Advertisement. Photographed and designed especially for *Profitable Advertising*, by Samuel L. Busha, and protected by the general copyright.

Suggestion for Tennis Goods Advertisement. Photographed and designed especially for *Profitable Advertising*, by Samuel L. Busha, and protected by the general copyright.

Foreign Abstracts

Simultaneous Action of Different Developers Dr. Luppo-Cramer has made experiments to see how far the general statements hitherto made about the action of a mixture of developers are correct, and for this purpose compared in the first place the action of a mixture of metol (a rapid developer) and hydrochinon (a slow developer) with the action of the constituents alone. It appeared that a mixture of 25 cc metol solution with 25 cc hydrochinon and 50 cc potassium carbonate possessed a tremendously greater developing power than twice the amount of metol alone with alkali. A developer with two parts of metol and three of hydrochinon develops almost exactly the same as with equal parts; on the other hand, when one part of metol is combined with four of hydrochinon, the reducing power is somewhat smaller. Since, however, this mixture is much more powerful than an equal quantity of pure metol, this mixture was next compared with pure hydrochinon. To 100 cc of hydrochinon-potash solution were added 5 cc of ten per cent bromide solution, while for 10 cc metol, 40 cc hydrochinon, and 50 cc potassium carbonate, 10 cc of bromide solution was used. The plates developed were about four times overexposed. It appeared that the rapidity of the metol was not affected by the excess of hydrochinon and the double dose of bromide. Other combinations of developers were tried, and it appeared from all the experiments that in the simultaneous action of different developing substances the reductive power is in general increased. (Phot. Corr., 1902, 39: 382).

Carbamid in the Developer Reiss's observation that urea in combination with an alkali can develop the latent image has caused Waterhouse to repeat the experiments which he made twelve years ago with carbamid and freshly precipitated, well-washed silver haloids, and which at that time gave negative results. For this purpose he exposed ordinary English dry plates and attempted to develop them with a mixture of urea and potash in the proportions prescribed by Reiss. It appeared that the mixture was incapable of developing, even after two days' action. It was, therefore, suspected that in Reiss's experiments with alkaline carbamid solution, not the carbamid, but some constituent of the emulsion acted as the developer. It turned out that Reiss had used exclusively Mercier's "Intensive" plates, the emulsion of which contains sensitizing alkaloids and other substances, which are capable of developing in contact with a simple alkaline solution. Waterhouse concludes that carbamid cannot be considered as a new developer, but at the most can only be used as a weak alkali. (Phot. Jour., 1902, 42: 175).

Halation a Development Phenomenon Precht has conducted researches from which it conclusively appears that solarisation (reversal of the negative image) is not a property belonging to silver gelatino-bromide itself, but that it appears during the process of development, and disappears and can be wholly avoided by properly conducted development. This depends on a hitherto unknown property of acid sulphites, especially acetonesulphite. When one develops a plate exposed in the region of solarisation, that is, with twenty to twenty-five thousand times normal exposure, in a four per cent edinol solution, to which one per cent of solid acetonesulphite is added, the time of first appearance of the image is lengthened about eightfold; then a negative appears, perfectly clear and becoming stronger for about three minutes. Then the strongest lighted parts begin to slowly disappear in their surroundings. Therefore, if the development is stopped at the end of about three minutes one obtains a normal image which shows no trace of solarisation. The action of the sulphite probably consists in a solution or decomposition of the oxidation product of the developer, since a brown solution of edinol becomes perfectly clear again by the addition of acetonesulphite. It is thence easy to assume that in all exposed places the oxidation products are quickly removed. If the development lasts long, fresh developer reaches the strongly lighted parts less quickly than the weakly lighted; the latter are, therefore, relatively more strongly reduced, and thus become solarised in contrast to the rest. The strongly retarding action of acetonesulphite and the destruction of the oxidation products possible in slow development thus allow the development to be stopped at a stage where the normal scale of light and dark is still expressed. (Phys. Ztschr., 1902, 3: 426).

Preparation of Red-sensitive Plates The following process for the preparation of red-sensitive plates by bathing is given by Burbank: Warm one gram of cyanin with 30 g chloral hydrate and 120 cc distilled water on the water-bath for thirty to forty min-

ALCOTT HOUSE, CONCORD, MASS. By Miss F. E. Beamish.

Second prize, Y. M. C. A. Camera Club, Waltham, Mass.

Taken with Zeiss Lens, Series VII A, September, 3 P. M.; bright light, Stop 32, in one-half second, on Hammer plate.

utes. Shake the solution well, and add 30 cc of strongest ammonia. Chloroform is set free, and the precipitated cyanin in soluble form remains on the side walls of the vessel. Allow to settle and decant off the solution. Dissolve the cyanin in about 100 cc of alcohol, and add to it a solution prepared by dissolving 8 g of chinin sulphate in 60 cc of warm alcohol. Make up the solution with alcohol to 250 cc. The sensitizing bath is prepared as follows: Distilled water, 160 cc; cyanin solution, 1 cc; strongest ammonia, 1 cc; silver nitrate, 1; 40 solution, 5 drops. Shake well before using. Immerse the plates four to five minutes; drain, and dry in a drying closet, in which stands an open vessel of concentrated sulphuric acid. The cyanin solution must be protected against the red light as much as possible. (Phot. Rundschau, 1902, 16:177).

Squeegeeing Prints According to J. W. Leigh, the sticking of prints is generally caused by the roller having been too vigorously applied. The squeegee should be passed once, or at most twice, over the print with a very light pressure, merely enough to remove the excess of water. The prints should have five minutes in the alum bath after ten minutes' washing, and then be washed thoroughly. It is better not to squeegee them at once, but to allow them to dry. Then take half a dozen at a time and place them in water for three or four minutes only before squeegeeing them to clean glass. (Amateur Phot., 1902, 36: 405).

Experiments on Solarisation Eder finds that the beginning of solarisation is at about 3,000-fold normal exposure, while reversal exists at 10,000-3,000-fold exposure. If such plates are developed with weak or strongly restrained developers the limit of solarisation is very different, since the strongly overexposed parts of the plate, instead of reversing, develop to a normal negative. Pyro-soda, with one to ten per cent of solid potassium bromide, is much better for this purpose than edinol with acetonesulphite. Solarisation cannot be regarded solely as a development phenomenon. A still better means for the destruction of solarisation is treatment with chromic acid. Ten to fifteen minutes' treatment with a solution of 1 g potassium bichromate, 3 g sulphuric acid, and 100 cc water completely destroys reversal, so that a plate exposed so as to give a perfect positive without this treatment gives a perfect negative with normal development after the chromic acid bath. (Phot. Corr., 1902, 39:645).

The Crucible

SOLARIZATION OR REVERSAL The researches of Professor Nipher on reversal, which were published in the PHOTO ERA about two years ago, have led to a great revival of interest in the study of this curious phenomenon, and the conditions seem to be now pretty well worked out. In France, Reeb has elaborated a system of photometry by which it is possible to secure with ease and certainty a reversed negative from a negative by contact printing. Several German experimenters have worked on the subject, the main object being to find out the conditions by which a perfect negative may be developed when there is reason to fear that partial reversal has taken place. This may happen in night photography, in photographs including the sun, or in dark interiors including a window. As regards the effect of various exposures, it may be said regarding the normal exposure as that which produces a normal negative with a normal developer, that 100 times that exposure will give a weak fogged negative; 200 times will give a brighter image with reversal in the high lights; 500 will give a weak positive with the shadows still negative; 1,000 will give a dense positive; and 25,000, a thin positive. Soon after this the image begins to be partly negative again, and the cycle may be repeated with increasing exposures. The recent experimenters have shown that reversal may be prevented by using strongly restrained developers. Acetonesulphite was the first restrainer proposed, but it appears that the same end may also be attained by the use of acid sulphites, potassium metabisulphite, sulphurous acid, or potassium bromide. Two per cent of acetonesulphite in the edinol developer produces a perfect negative with 1,000 times the normal exposure, and potassium metabisulphite is even more effective with the same developer, but at 12,000 times normal exposure these both fail to produce negatives. Pyro-soda with up to ten per cent of bromide is also highly recommended. A preliminary bath is often preferable to a modified developer, Eder recommending a weak chromic acid solution (for formula see Foreign Abstracts) while "V. B." in "Apollo" favors soaking for twenty-four hours in two to three per cent solution of ammonium persulphate in cases of extreme overexposure. The utility of stand development for overexposed plates is emphasized by these researches, for the weak developer is almost as good as the strongly restrained one for the prevention of reversal, and the detail can all be got out with a weak developer before the reversal appears, leaving density to be attained by subsequent intensification.

BLISTERS ON VELOX PAPER At this season of the year the velox printer is apt to be troubled with blisters on the prints, which appear when the washing is in progress. I have been much troubled by these blisters, and was a long time in finding out the reason for their appearance. The cause is still a mystery, but I have found that they appear only when the prints are placed in running water several degrees colder than the developing and fixing solutions. As it is difficult to warm the washing water, I have adopted the practice of keeping my developing and fixing solutions at nearly the temperature of the wash water. As they warm rapidly in an ordinary room, I immerse the trays containing the solutions in a larger tray containing cold water, which I change once in a while. Using this procedure, blisters no longer appear. Another advantage of cooling the developer is that development is slower, and can be controlled more readily. Another way of preventing the blisters is to treat the prints with formaline before washing, but this prolongs the washing considerably. If blisters have appeared they may be reduced in size by soaking the print in alcohol, or if they are small, the print after treatment with formaline, may be squeegeed.

THE BIRCHES. First prize, Y. M. C. A. Camera Club, Waltham, Mass By GEO. HOPKINS.
Taken, August, 11 A. M., Stop F : 8 ; exposure, one twenty-fifth of a second, on Carbutt's Eclipse plate.

Notes and News

Mr. Wilbur Dean Hamilton, the well-known artist and instructor in the Normal Art School, began a series of talks on composition, under the auspices of the Lens and Brush Club, at their quarters, No. 3 Boylston place, on Friday evening, Jan. 23. The course will run through six evenings, and will be arranged as follows:

First evening. Subject: Taste and Skill. What makes a beautiful picture?

Second evening. Subject: Character and Charm. How can we give the charm and still preserve the character?

Third evening. Subject: Gesture and Grace.

Fourth evening. Subject: Light and Shade.

Fifth evening. Subject: Composition and Subordination.

Sixth evening. Subject: The Masters.

DENVER, COLORADO We are asked to announce that the Fourth Annual Salon of the Colorado Camera Club will be held at the club-rooms, in the Appel Building, 1230 Sixteenth street, Denver, Col., March 23-28, 1903.

As this will be the first print exhibition given in the new club-rooms, which are acknowledged to be the most commodious and best appointed of any camera club quarters in the West, it is the expectation that the pictures shown in this salon will far excel in artistic merit those exhibited in former years.

All photographers are cordially invited to submit pictures for entry in this exhibition before March 5.

Further information will be furnished by George L. Beam, secretary Colorado Camera Club, 400 Appel Building, Denver, Col.

CLEVELAND, OHIO The First Annual Salon of the Cleveland Camera Club is announced to take place in the Art Galleries of Fenton and Stair, of that city, from March 23 to 29 inclusive.

Pictures can be sent to the club-rooms in the Caxton Building on or before March 10.

A catalogue will be issued containing half-tone reproductions of a number of the prints. A copy of the catalogue will be mailed to each exhibitor, and will be official notice of the acceptance or rejection of prints submitted.

Address all communications and inquiries concerning the salon to the Cleveland Camera Club, 625 Caxton Building, Cleveland, Ohio.

LONDON, ENG. The publisher of "Knowledge" announces in the programme for 1903 that it is intended to devote a larger amount of space to Microscopy than hitherto, and by the cooperation of specialists to publish articles treating on different departments of both the popular and scientific sides. Among those who have promised to contribute are Mr. F. Noad Clark, "The Photography of Opaque Objects"; Mr. Sanger Shepherd, "Photo-Micrography in Natural Colors."

ALBANY, N. Y. The Albany Camera Club held a meeting Jan. 2, and amended the constitution and by-laws. The initiation fee of $10 was abolished. The members are anxious to secure a number of young members so as to give the club a boom, and from this date no admission fee will be charged. At the conclusion of the business meeting the members were treated to an exhibition of slides from the Syracuse and Ogdensburg Clubs.

BOSTON, MASS. The Boston Camera Club will give an exhibition of the pictures of Miss Mary Devens, at the club-rooms, from Feb. 4 to 14. Miss Devens is a member of the Old Cambridge Camera Club, and was recently chosen a member of the Linked Ring, of London, in recognition of her work as an artist-photographer.

Mr. F. Holland Day continues to hold his public receptions on Monday afternoons at his new studio in the Harcourt Studio Building, on Irvington street, Boston, where he is always the center of an interesting group of artistic workers in photography and art.

NEW YORK Messrs. Follmer and Schwing, makers of the now famous Graflex Camera, announce their removal from Broadway, N. Y., to 407 Broome street, corner of Elm, of that city. With the discontinuance of the Broadway store they will concentrate their business, which has now assumed large proportions, and open a double factory and office at the above-named address. The specialty of this concern is the manufacture of high-class photographic outfits. In this connection it is interesting to note that Dr. Lorenz, the famous surgeon, declared unequivocally that the photographic outfit furnished by Follmer and Schwing to the New York Hospital was the finest apparatus that he had ever seen, either in this country or in Europe.

A written request is sure to bring one of their handsome descriptive catalogues to your address.

An extremely interesting and instructive lecture, by W. I. Scandlin, Esq., on the subject, "New York Through the Camera Fifty Years Ago," was given before a large audience at the New York Camera Club-rooms, on Tuesday evening, Jan. 27.

The beautiful lantern slides and the masterly presentation of the subject by the speaker made the evening one long to be remembered by those who were fortunate enough to be present. Mr. Scandlin is widely and favorably known to the photographic world as the former editor of "Anthony's Bulletin," before its consolidation with the "Photographic Times."

BROOKLYN, N. Y. An interchange of lantern-slide exhibits has been arranged among the various clubs of the League of Long Island Photographic Clubs, and the first was largely attended at the rooms of the Brooklyn Camera Club, on Friday, Jan. 16. The slides shown were the work of the Brooklyn Institute Department of Photography. An interchange of prints will be arranged by the league soon.

The Brooklyn Camera Club had an exhibition of photographs and lantern slides during the first week in February. This exhibit included work from the various clubs and from individuals not club members, and there was a fine display.

CAMBRIDGE, MASS. The Harvard University Camera Club has challenged Yale, Princeton, Pennsylvania, and Columbia to an intercollegiate photographic contest, to take place some time during February or March. Each college will submit about fifty pictures, which will be judged by a competent committee, and the award will be made to the college whose work shows the most merit. First and second prizes will also be given, as well as honorable mention to individual pictures.

ROCHESTER, N. Y. There was a special meeting of the Rochester Camera Club, Jan. 23, at the Mechanics Institute. The programme included the second consignment of lantern slides from the American Lantern Slide Exchange, of New York, of which the Camera Club is a member. The club is planning for its first annual exhibit, to occur some time during the winter.

The new line of cameras offered by the Century Camera Company, of this city, is a marvel of skill, grace, and usefulness. The Century Camera is a medium-priced instrument, but will be found equal to almost any emergency. Those who have used them speak in the most complimentary terms regarding them. And we advise all our readers who contemplate purchasing new instruments to write for their catalogue of 1903. It will be sent for the asking, and will introduce the reader to some of the finest photographic goods on the market to-day.

REPORT OF EXECUTIVE COMMITTEE OF PHOTOGRAPHERS ASSOCIATION OF AMERICA

INDIANAPOLIS, IND. Pursuant to the call of Pres. J. Geo. Nussbaumer, of Buffalo, N. Y., the executive board of Photographers Association of America met, Jan. 12, 1903, in executive session, at Indianapolis, with the following members present: J. Geo. Nussbaumer, president; J. E. Giffin, second vice president; F. R. Barrows, treasurer; G. G. Holloway, secretary.

Mr. H. A. Collings, the first vice-president, having accepted a position with the Standard Dry Plate Company, and not being eligible to serve on the executive board, tendered his resignation, and C. R. Reeves, of Anderson, Ind., was appointed in his stead. The executive committee then organized as a whole, and, on motion, it was decided to hold the next convention Aug. 4 to 7, 1903, inclusive.

The secretary reported as follows:

Received on 1901 account . . .	$ 197.50
" for advertising . . .	979.00
" from sale of space of desks .	1,963.25
" on entertainment fund . .	100.00
Total receipts	$3,239.75

The treasurer reported as follows:

Cash on hand Jan. 1, 1902 . . .	$4,379.54
Received from membership and dues .	2,196.00
" " secretary	3,239.75
" " sale of ladies' pins . .	50.25
" " G. M. Edmondson . .	49.24
Refund — Trunk Line Traffic Association,	17.00
Total	$9,931.78
Paid in vouchers	4,755.98
Balance on hand Jan. 1, 1903 . .	$5,175.89

The president appointed Geo. G. Holloway and J. E. Giffin a committee to audit the books of the secretary and treasurer, which were found correct and approved.

On motion, it was decided to accept the offer of Das Deutcher Haus (The German House) as the most desirable place to hold our next convention.

On motion, it was decided that the exhibition of pictures be strictly complimentary, and that no prizes shall be offered, the committee holding that the educational features of the convention were most to be desired, and that the exhibitor has a sufficient incentive in the production of his ideas of the highest type of photographic portraiture to be compared with the product of other members of the fraternity.

The president appointed the following committees:

Transportation: J. Geo. Nussbaumer and Geo. G. Holloway.

Badges and Buttons: F. R. Barrows, J. G. Nussbaumer, and G. G. Holloway.

Hotels and Accommodations: J. E. Giffin and C. R. Reeves.

Decorations and Hall: C. R. Reeves, J. E. Giffin, and F. R. Barrows.

"Association Review," the official journal: C. R. Reeves, F. R. Barrows, and Geo. G. Holloway.

Entertainment: J. E. Giffin, G. G. Holloway, J. Geo. Nussbaumer, and C. R. Reeves.

Printing and Advertising: J. Geo. Nussbaumer and G. G. Holloway.

Committee on Information: J. E. Giffin, chairman.

On motion, it was decided to call the publication authorized by the association the "Association Review," the official journal of the P. A. of A.

The following rules were adopted to govern the exhibition of pictures:

First: Exhibits may be framed or unframed, at the discretion of the exhibitor.

Second: The association will not be responsible for any loss or damage to pictures in its charge, but special precaution will be taken by the executive committee to insure the safe return of all exhibits intrusted to their care.

Third: All pictures exhibited must remain until the close of the convention, and will not be delivered to any one but the exhibitor, without a written order.

Fourth: Applications for space in the Art Department shall be made to C. R. Reeves, first vice-president, Anderson, Ind.

Fifth: All pictures submitted for exhibition must be addressed to C. R. Reeves, first vice-president, care of German House, Indianapolis, Ind.; forwarded at owners' risk, and delivered not later than Aug. 1, 1903. All charges prepaid.

Sixth: Have your box covers screwed instead of nailed. Your home address must be marked on the under side of cover for return of pictures. The association will not be responsible for exhibits not packed in accordance with this rule.

Seventh: Exhibits for Manufacturers' and Dealers' Department to be shipped to Geo. G. Holloway, secretary P. A. of A., Indianapolis, Ind., care of German House.

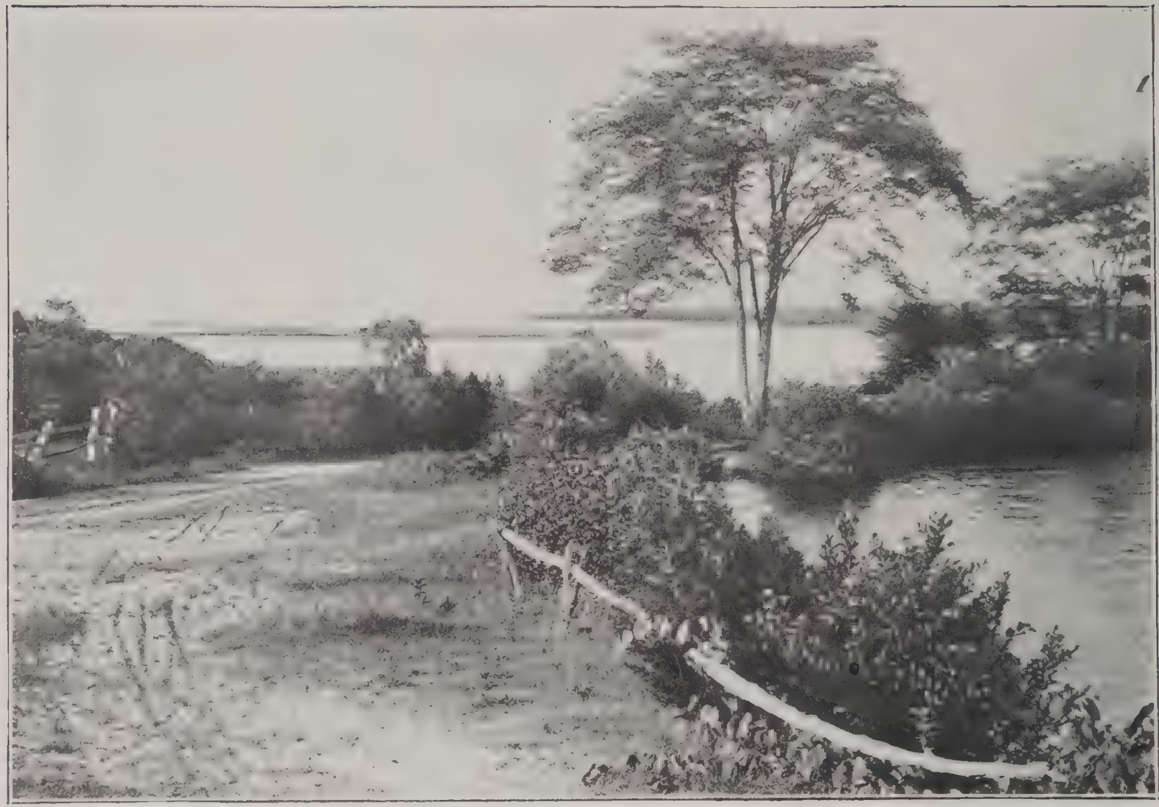
ALL CHARGES PREPAID, and must be placed in position not later than Aug. 3.

Eighth: All boxes and packages will be accepted at any time previous to Aug. 1, so that exhibitors need not feel any uncertainty about the safety of their goods. No exhibit will be allowed to be removed from the hall until close of convention.

Ninth: No manufacturer or dealer or his representatives shall be represented on the floor of the hall unless he or they rent floor space or desk room and the manufacturer or dealer shall in addition pay two dollars for each representative attending the convention.

F. R. Barrows, Treas., Boston, Mass.
Geo. G. Holloway, Sec'y, Terre Haute, Ind.

Open Criticism



"If you would be pungent, be brief; for it is with thoughts as with sunbeams — the more they are condensed, the deeper they burn." — *Southey.*

Out of the large number of criticisms received for "A Winding Roadway," published in the January issue, we have selected two which seem to have hit upon the salient defects of the picture. They are as follows:

No. 1.— My criticism of the picture, "A Winding Roadway," is: The title does not fit the subject, for the cliff, not the road, is the predominating feature of the picture. If the idea was to show the road, about half of the cliff should be trimmed off. If the artist wanted the view as it is, the title should be altered.

The lighting is not good. It is probably owing to the sun being nearly overhead and nearly behind the camera.

The lines of composition are good, likewise the sky. Judicious trimming would improve this picture, but a different lighting is what it most needs.

J. S. HENRY.

No. 2.— "A Winding Roadway" leaves too much to the imagination to furnish the windings. The mass of dark in lower left is too far from the corner. There is too much sky at upper left and too much uninteresting stone cliff. The streak across the bottom appears to be a fault of printing.

Trim 13-16 inch from left, 2 inches from right, 1-2 inch from sky, 1-16 inch from bottom and you have a picture.

H. G. DORSEY.

The prize award will go to No. 1.

We give another picture in this issue. Use a postal card and limit yourself to one hundred words. The prize award is one year's subscription to the PHOTO ERA.

The *Free Lance* is responsible for the following amusing passage on modern warfare: The scene is the battlefield.

Commander-in-chief to Aide-de-camp: "What is that large body of men occupying the hill on our left?"

Aide-de-camp — Those, sir, are kodak fiends.

Commander-in-chief — And the black mass of men I see well in front of me?

Aide-de-camp — Operators for the biograph.

Commander-in-chief — And the battalion on our right, with curiously formed guns?

Aide-de-camp — Gramophone and phonograph experts, with their respective machines to take records of the battle, the roar of the guns, bugle calls, cries of the wounded, etc.

Commander-in-chief — 'Tis well. Let the battle begin.

The Round Robin Guild

Conducted by Elizabeth Flint Wade

(Any amateur photographer may belong by sending in his name and address)

"Hang contemporaries!" exclaimed genial Charles Lamb when his equanimity was suddenly shaken by a non-appreciation of what he considered a rather good bit of work, "hereafter I'll write for posterity!"

There are very few of us really willing to work for posterity. We want to see and enjoy results in our own day and generation and let posterity take care of itself, for, practically speaking, posterity will be of no earthly use to us.

There is, however, a work in contemplation which while it will be done largely for posterity, will redound to the present-day credit of those of this generation who engage in it. This work is neither more nor less than the Photographic Historical Survey of the United States. The idea itself has been already set forth in previous numbers of the PHOTO ERA. Amateurs have been asked to assist in the work, and a large number have responded, signifying their interest and their willingness to help in the work.

"The time has come," as the Walrus says, in Alice in Wonderland, to do something more definite; the work is now to be taken up systematically, and the Round Robin Guild is to be official organ of the organization. A regular society is to be formed, with president, vice-presidents, secretary, and treasurer, and a board of directors. There will be as many directors as there are States in the Union, so that each state will be duly represented and mutually interested in the work.

Circulars are already in preparation setting forth in detail the plan of the work. These will be sent to historical societies, patriotic societies, and camera clubs in all parts of the United States, and to as many private individuals as apply for them.

Members are wanted from every State, and the first five hundred sending in their names will be enrolled as charter members and their names will appear in all records of the association. Special diplomas, bearing the signatures of the officers, will be issued to the charter members, and later other diplomas will be issued for members who do especially meritorious work. Every quarter a report of the work will appear in the PHOTO ERA, showing just how much progress has been made. This record will also be printed separately and sent in leaflet form to all the members of the Guild.

Those members of the Round Robin Guild who have already sent in their names as helpers in this record work will be enrolled as charter members of the Guild, but each one is requested to send his name and address again to simplify the work of the secretary.

Some three years ago the Photographic Society of Birmingham undertook to make a systematic survey of Warwickshire, the part of England so rich in historic associations. It is in Warwickshire that the Romans have left their wonderful roads; in Coventry, made famous by the legend of Lady Godiva, where the Normans have left their traces; and Warwick and Kenilworth castles are but another name for the history of Queen Elizabeth and the Earl of Leicester. And not least among the storied places of Warwickshire is the little town of Stratford-on-Avon, with all its associations as dear to the American as to the English heart.

The work of making a pictorial survey of the historical places in this interesting bit of England was carried on in a most systematic manner. Each member was given a certain area, thus assuring in the beginning that the work would not be done in a haphazard way.

To inspire its members to do their best, prizes were offered for excellent work.

When the survey was completed the best pictures were chosen, lantern slides made from them, and illustrated talks given to interest people at large in the completed work.

The idea was so well carried out and met with so much favor that from it has been formed the National Photographic Association, its president being Sir Benjamin Stone, a member of Parliament and one of the most earnest workers in the promotion of the scheme of making a permanent photographic record of the whole of England. He has succeeded in arousing so much interest in the work that the British Museum, that great repository of the world's wonders, has undertaken the arrangement and preservation of the collection. Thus, from the modest work of the Birmingham Photographic Society has been organized a society that is likely to render one of the greatest services the present generation can give to those who are to come after.

It is just this sort of work that the Historical Guild of the United States purposes to undertake. By the time the spring flowers are blooming we expect to have the society organized and in working order. We want as many members as possible, and if a member sends or contributes only one picture, if it be a valuable one, his work will be appreciated. Send in your names at once, and until the election of the officers which will take place before our next issue, all communications may be sent to the editor of this department.

Who will be the charter members? Let us have them before the first of April, and many more besides.

Apropos of the importance of this work read in the December PHOTO ERA of the destruction by fire of the old Whittier homestead. All traces of the original building swept from the earth; but the camera has preserved its semblance.

A few years ago the old Avery homestead in Groton, Conn., which had sheltered eight generations of Averys, took fire and burned to the ground. Fortunately, the house was not only a good example of colonial architecture but was very picturesque as well. It has figured in sketches of old colonial homes, and has been made the subject toward which many an amateur has directed his camera, therefore the house has been photographed from all sides, but alas, there are no pictures of its quaint interior! The land on which the house stood, together with about an acre of land besides, was deeded by the owner to the Avery Historical Association, and on the site of the old house has been erected a monument to its builder, Capt. James Avery, the hero of many a colonial strife with foes, both the redmen and British. The park is surrounded by a stone fence cemented so firmly that Time will wrestle with it many years in vain, while the entrance to the park is over a stone stile, thus shutting out any four-footed travelers whose curiosity or hunger might tempt them to enter and despoil the place.

This will be one of the spots which will be included in the Pictorial Historic Record, and it is well that the photographer has such excellent negatives for his contribution to the collection.

We are not so rich in historic places as old England, but what we have should and must be preserved to us in pictorial, if not in the original, form.

This is the task which it will be the pleasure of the Pictorial Historical Guild to perform. It means careful, systematic, and thorough work; but with the perfection of instrument, plate, printing medium, and the man behind the camera, there is no reason why it should not be performed in a manner which shall reflect credit, not only on the active workers, but be a national pride as well.

Many hands make light work, so let us have just as many members of this National Guild as possible.

SETTING A LANDSCAPE

Have you ever studied a stage setting? If so, you have noticed how every article is placed so as to make an effective ensemble. There is no helter-skelter work in staging the scenes of a play, but each "piece of property" used has its own important or minor part to play in the proper make-up of the whole.

Have you ever thought that the same idea could be applied to a landscape,— that it could be "set" so as to make a harmonious whole? The first thing to consider is the horizon line. Set that so that it either falls below or rises above the center of the view included in the angle of the lens. Having "set" it in its proper place in the square bounded by the ground glass, see that it is broken more or less by objects in the distance. In case you have set the horizon nearer the bottom than the top, see that you have plenty of clouds in the sky to lend variety to the "wide expanse of ether," as the poet would say.

Having set your horizon, study the lines in the picture. They should run, according to artists' laws, either horizontally or in a pyramidal form. If they run in a diagonal line then set the tallest object in the view at one side of the picture. If they run in pyramidal form set the tallest object, or point, a little to one side of the center of the picture.

If you set your landscape in the middle of the day it will be lacking in contrast, as the shadows are directly under the objects included in the picture; but if you set it in the morning or evening, when the shadows are long, they will give vigor to your picture and add to the perspective.

If you set your landscape with figures in it, then they must be at such a distance from the camera as to harmonize in size with surrounding objects.

In setting a landscape, heed Sidney Smith's advice and "take short views," and you will secure far more pleasing and artistic pictures.

INTENSIFYING OF WEAK NEGATIVES

There are three kinds of negatives which may be improved by intensification. One, a negative which has been correctly exposed but underdeveloped; second, a negative which has been slightly underexposed; and third, a negative which has been overexposed and too quickly developed.

Various methods are employed for intensification, the object of each being to act upon the particles of silver on the plate so as to increase their printing value. The most common medium for strengthening the density of a plate is mercuric chloride. This is a dangerous chemical and must be handled with great care. It injures not only the skin, but, if not properly managed, will destroy the image itself. This latter catastrophe will happen if the plate to be subjected to its action be not entirely freed from hyposulphite of soda. After a while the film will turn yellow, and in time will be destroyed.

Mercuric chloride is very energetic in its action, and is a specially good intensifier for the first named negative, the correctly exposed and underdeveloped. Ready-prepared mercuric solution may be purchased, but the most satisfactory results are obtained by having a solution made up fresh from some tried and proved-good formula. The following is among the best solutions for intensifying with mercuric chloride: —

Solution 1. Muriatic acid, twenty minims; chloride of ammonia, one and one half ounces; bichloride of mercury, one and one half ounces; water, sixteen ounces.

Solution 2. Strong ammonia, two drams; water, ten ounces.

In solution No. 1 add the ingredients to the water in the order named: first the acid; then the ammonium chloride; and, when dissolved, the mercuric chloride. If the plate has been dried — and the process of intensification is more successful if the plate has been dried — wash it for a few minutes and then immerse it for ten minutes in a ten per cent solution of alum. Place the negative face up in the developing tray, and flow with the mercuric chloride solution. Rock the tray as during development. The action of the solution will be to bleach or whiten the image until it appears as a positive. When it has reached this stage remove from the solution and wash in five or six changes of water, or for a few minutes in running water. Place face up in a clean tray, and flood with the ammonia solution. The ammonia changes the white image back again to its former black color and deepens its density. In case the image on the plate is very faint, double the quantity of ammonia given in the formula for reblackening the image. Wash well, and before drying immerse for two or three minutes in a tray in which has been dissolved a very little water-color paint, either burnt sienna or yellow chrome. This will tinge the film and add to the printing quality of the plate.

A negative that has been overexposed, while full of detail, is too thin to make a good print. Then, too, it is always lacking in contrast. If such a negative be intensified it will only thicken the film without improving the contrast. Such a negative is first reduced and then intensified. The reducer used may be the well-known solution called Farmer's reducer, or one may use the new reducer — the persulphate of ammonia. This latter reducer attacks the dense parts of the negative first, and does not act on the shadows immediately; while Farmer's reducer acts evenly all over the plate. When the negative has been reduced it is well washed and subjected to the mercuric chloride treatment with quite satisfactory results.

If a negative be so much underexposed that it is lacking in detail in the shadows no treatment will ever make it into a satisfactory negative.

There are many formulas and preparations for the intensifying of negatives, but the better way is to make negatives which need no intensification.

ANSWERS TO CORRESPONDENTS

Mrs. R. E. Jackson.—It is true, as you say, that a narrow, black line brings out the detail of some prints better, especially in a gray print, but the line must be very narrow, or the picture is marred rather than improved. You have already seen, in the January number, the article on clouds, with a few good examples of cloud photography. In the March number suggestions on combining two negatives, one with clouds and one without, will be given, and you may find them helpful in performing this delicate bit of combination printing. Your prints will be forwarded to me, and I shall be glad to make any suggestions in regard to the mounting, etc., if on examination they need any improvement.

Henry A. Jenks.—The blue-print formula has been forwarded to you, and I trust you have already used it with success.

Martina D. Bagg.—Your recent communication is the only one which has been received. Membership tickets and circulars have been forwarded to you, and it is hoped that you will also become a member of the National Historical Guild, an outline of which is given in this number.

F. A. Carrier.—It is impossible to tell, without seeing the negative, of what nature the yellow spot is which has appeared on it; but, unless something out of the ordinary, the formula given in the December number will remove it. If it does not, you may comfort yourself that if it does not cure it will not kill; in other words, the solution will not injure your negative.

E. F. Crooker.—An article on "How to Construct a Bellows" will be found in the PHOTO ERA for February, 1900. If you have not this number it will be forwarded to you on receipt of price, fifteen cents.

T. C.— The June number of the PHOTO ERA will be forwarded to you on application to the circulation department and the enclosure of the price, 15 cents. Your membership ticket has been forwarded to you.

Morris. K.— A notice of your exchange will be placed in this department for one issue free of charge. The members of the Round Robin Guild have the privilege of putting notices of exchange in the Round Robin Guild department without any charge being made. The notice will appear once, and if it be wished repeated then a small fee will be charged.

Ben. L. M. N.— It is not necessary to use distilled water in preparing photographic solutions unless the water be very impure. For stock solution boil the water, then filter it through filtering paper, or a wad of surgeon's cotton inserted in the glass funnel and it will be pure enough for all photographic purposes. Of course if one can get distilled water without trouble it is the ideal medium for making all chemical solutions where water is used.

Barton Kellogg.— Would not advise you to compound your own flash-light powders as the ingredients are highly explosive and should be handled by an expert in such work. It is quite as cheap and much safer to buy the powders prepared for use. Have you ever tried the flash-sheets? These make no noise and burn more slowly than the powders, thus insuring a more artistic lighting in the picture. The fault with most flash-lights is the intensity of the high-lights and the density of the shadows. This can be controlled in the developing in a measure, using a developer which does not tend to produce contrast The metol hydrochinon is an especially good developer for flash-light negatives.

Emily. B.— To harden your films and render them impervious to heat, soak them, after they are developed and before they are fixed, in a solution of formaline, using one ounce of the solution to twenty of water. Rinse the plate well when taken from the developer and place for three minutes in the formaline solution. Rinse again and fix as usual. This treatment enables one to dry plates very rapidly by heat, as after the hardening process heat seems to have no effect on the gelatin film.

E. T. F.— A clearing solution useful for both plates and slides is made by taking four ounces of a saturated solution of alum, four ounces of a saturated solution of citric acid, and two drams of muriatic acid. After fixing, rinse the plate well and then place in the clearing solution for about two minutes. Wash well and dry. This solution clears up the shadows and makes a good printing negative. It also hardens the film.

George S.— Try printing from your weak negative through an orange-colored glass; or take a negative which has been spoiled, remove the silver from the film, according to directions given in the July PHOTO ERA, then, before drying, soak for a few minutes in a tinting solution made of chrome yellow (water-color) or of burnt sienna. Leave in the solution long enough to give the gelatin a slight yellow tinge. Place this tinted plate in the printing-frame, the negative on it, and on the negative the printing-paper. Print in diffused light — not in direct sunlight — and the retarding of the printing will result in a fairly good print, which will not turn a slaty gray in the toning solution, as your prints from the negatives now do.

J. T. S. — Hyposulphite of soda and sulphite of soda are two entirely distinct chemicals. Hyposulphite of soda is used for fixing negatives. Sulphite of soda will not perform this office. Sulphite of soda is used for blackening negatives that have been bleached in intensifying by bichloride of mercury. It is also added to alkaline developers as a preservative.

Owing to the large number of entries in our First Annual Photographic Contest, we were unable to reach the Bimonthly Competition, and give it the careful attention that it merited until now. We are happy to announce that the prize winners in the November contest, (subject) Night Photography, are as follows:

FIRST PRIZE. PHOTO ERA Portfolio Artist's Mounts. T. Edward Schiedt, 3218 Montgomery Ave., Philadelphia, Pa.

SECOND PRIZE. PHOTO ERA Enlargement. C. H. Wilkins, Newton Centre, Mass.

THIRD PRIZE. Subcription to the PHOTO ERA for one year, beginning with the current number. C. H. Jones, Chicago, Ill.

HONORABLE MENTION. E. L. Fisher, South Sudbury Mass.

THE SUBJECT FOR JANUARY IS "SNOW SCENES"

Any member of the Guild may compete. All photographs must be marked with full name and address of the sender, and further distinguished by the words, "Round Robin Guild Prize Competition for January." As many pictures may be sent as one desires, but it is wiser to limit the number to five each. All pictures must reach this office on or before Feb. 10. Direct, "Round Robin Guild Photo Competition, PHOTO ERA, Boston, Mass." If stamps be enclosed for postage, pictures will be returned to the sender. Circulars in regard to the Guild, privileges of membership, etc., will be sent on application.

PHOTO ERA

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National Historic Picture Guild of the United States of America

Are you interested in preserving, in pictorial form, the historical landmarks of the nation? If so, you are invited to become a member of the National Historic Picture Guild, now being organized and set in working order, under the auspices of the PHOTO ERA.

The work to be undertaken by this guild is the making of a pictorial record of the historical places in the United States, and storing this collection with the Government at Washington. A similar work is now being carried on in England, and the British Museum, recognizing the importance and value of such a work, has undertaken the classifying and arranging of the pictures.

It is only within a few decades that Americans have formed patriotic societies, such as Daughters and Sons of the Revolution, Colonial Dames, etc. The wish to join these societies has made it necessary for the would-be members to search among long-forgotten and musty records for correct and unbroken lines of ancestors, and in their search they have brought to light not only valuable historical records but have unearthed many historic ruins, and brought others into prominence. The enthusiasm of the patriotic societies has given new life to our historical societies, and both are now endeavoring to preserve these ancient historical landmarks. It is through their efforts that the famous Saltonstall House, in Ipswich, was rescued from the Goths and Vandals, in the shape of destructive tenants, and restored and made the headquarters of the Historical Society.

To the members of these energetic societies, the idea of preserving in, pictorial form, many of these historic places which are so rapidly passing away, is sure to appeal very forcibly. It is to them that the originators of this idea look for support and encouragement in their work. By their personal effort and friendly encouragement they will make it possible for the work to become an accomplished fact.

But to make the work a success it will be necessary to enlist the services of the amateur photographers in every part of the United States. Every amateur who can make a good picture and is in position to make a picture of historic interest is invited to join the Guild, and to set at work at once to contribute his might to the mighty whole.

The first officers will consist of a president, three vice-presidents, a secretary, treasurer, and board of directors, which latter will consist of a member from every State in the Union. The directors will be persons directly connected with historical work. There will be a charter membership; the first five hundred sending in their names will be enrolled as such and their names will thereafter appear in all records of the association.

The PHOTO ERA offers its pages for all official reports and suggestions in regard to the work, and in the department of the "Round Robin Guild" will be found this matter.

The idea of a historic guild is not new for it was suggested a year ago, and a goodly number of workers have signified their willingness to assist. These members will be enrolled as charter members of the newly organized society.

In every State it will be necessary to have a common center to which the pictorial records may be sent. Here they would be carefully stored and, when as nearly complete as possible, put in shape and forwarded to the headquarters of the Guild in Washington.

The capital of each State would be the natural headquarters, and the historical society of the capital the custodians of the collection. A State collection would also be stored in the capital with the historical society, so each State would have its own collection and also be represented in the national collection.

Will you help in this work by becoming a member of the Guild, and will you state, when writing, just what you will do? If you are an amateur, state what pictures you will endeavor to send, and if a member of a patriotic society, state what assistance you will give the undertaking.

Until all officers are elected, the communications may be sent to Elizabeth Flint Wade, Editor of "Round Robin Guild," PHOTO ERA, Boston, Mass.

Useful Applications of Photography

One of the Chicago railways has a photographing department whose function is to produce "progress pictures" for the engineering, the operating, and mechanical departments. Photography has entered so largely into railroading that it now often takes the place of a manuscript report. It tells, with the greatest fidelity, the story of the condition of road-beds, bridges, building operations, wrecks, etc., and it relieves headquarters of much of the drudgery of wading through lengthy written statements.

In order to improve the sanitary conditions and prevent the spread of infectious disease, photographing air has been made one of the duties of the department of street cleaning of New York. The idea originated with Commissioner Woodbury and McDonough Craven, another official of the department, who is in charge of the work of exposing gelatin plates at various points throughout the city, the purpose being to collect atmospheric germs and hold them until their pictures may be reproduced.

The ultimate purpose was to discover what portions of the town are most infected with bacteria, what germs are peculiar to certain neighborhoods, how the different breeds are affected by different kinds of pavements, and what are the ratios of germ population to human population in given localities.

Needlehole Photography

This subject which is now engaging considerable attention is one of the most fascinating branches of the art of photography. We call especial attention to the article written by W. H. McCorkle, published elsewhere in this issue, and, for the benefit of those of our readers who may not have seen Mr. Yellott's article on "Camera Notes," referred to by Mr. McCorkle, we have had Mr. Yellott prepare, for publication in the PHOTO ERA, a brief statement of his method of determining exposures in pinhole photography. Mr. Yellott has always contended that the computation of exposures in this class of work is susceptible of mathematical calculation, and does not depend upon the result of experiment. He informs us that he has tested his system with "focal lengths" ranging from one to eighteen inches, and that the results are satisfactory in every respect.

In working with the ordinary lens the F.– value of a given aperture is determined approximately by dividing the focal length of the lens by the diameter of such aperture; thus, with a focal length of eight inches and an aperture of one inch, the F.– value of such aperture is F.–8. With a needlehole the same rule holds. The F.– value of a needlehole one thirtieth of an inch in diameter is F.–30, at one inch. Working with such an aperture at one inch from the plate, the exposure for F.–30 (or, practically, No. 64) should be given. Racking the lens-board out to three inches, we square the focal length, getting nine, and multiply the proper exposure for F.–30 by that number. Racking it out to ten inches, we square ten, and give one hundred times the proper exposure for F.–30. With a needlehole one sixty-fourth of an inch in diameter the value of the aperture is F.–64 at one inch. We find the proper exposure for F.–64, and multiply it by the square and the distance of the needlehole from the plate.

Harvard Astronomical Observatory

Notice has just been received at the Harvard Astronomical Observatory of a gift of $2,500 to the observatory from the income of the Carnegie Institution Endowment Fund. The award is for the year 1903, and the money is to be used toward paying the salaries of observers who are to study the large collection of astronomical photographs which have been made by the Harvard Observatory within the past few years.

The Harvard Observatory has a huge collection of photographs of peculiar interest to astronomers — estimated by Director Pickering to reach 100,000 in number. Lack of sufficient funds for the purpose has heretofore prevented an extensive study of these photographs, yet it has been felt that an exhaustive examination would reveal much of importance to the scientific world. Many of the photographs, moreover, are not to be found outside of the Harvard Observatory, and on this account are of especial value.

Professor Pickering has already put several observers at work on the photographs as a result of the gift. Should the examinations this year prove as satisfactory as is hoped a request for a larger donation will probably be made next year.

Exhibit of Alvin L. Coburn

One of the most interesting and charming displays of original work in photography shown this year was an exhibition of photographs, the work of Alvin Langdon Coburn, Boston, fellow of the Photo-Secession. It was held at the New York Camera Club from Jan. 12 to Jan. 30 inclusive, and has attracted considerable attention, not only because of the strength and versatility shown by the artist, but also because of its striking originality. Though still a very young man, Mr. Coburn gives promise of good things for the future.

Increase of Price Owing to the late date of issuing the January magazine, it has been found impossible to increase the price of the new Photo Era without being unfair to subscribers living at a distance. The Photo Era is desirous of being perfectly fair with its reading constituency. And therefore it now gives timely notice that on and after April 1, 1903, the retail subscription price will be advanced to $2.50 a year, 25 cents a single copy. It is hardly necessary to say that this increase of price is due to the increased cost of production of the magazine, and that the reader will receive good value for his money.

Meanwhile, during the months of February and March we will continue to receive subscriptions at the old rate, 15 cents a single copy, $1.50 a year.

International Congress of Applied Chemistry We are requested to call attention to the Fifth International Congress of Applied Chemistry, which will begin its session in Berlin on May 31, 1903. This meeting will be the most important function of the kind ever held, and includes all departments of Applied Chemistry.

Special committees and sub-committees have been arranged for all countries. The general chairman of the American committee is Dr. H. W. Wiley, chief of the Bureau of Chemistry of the United States Government, at Washington.

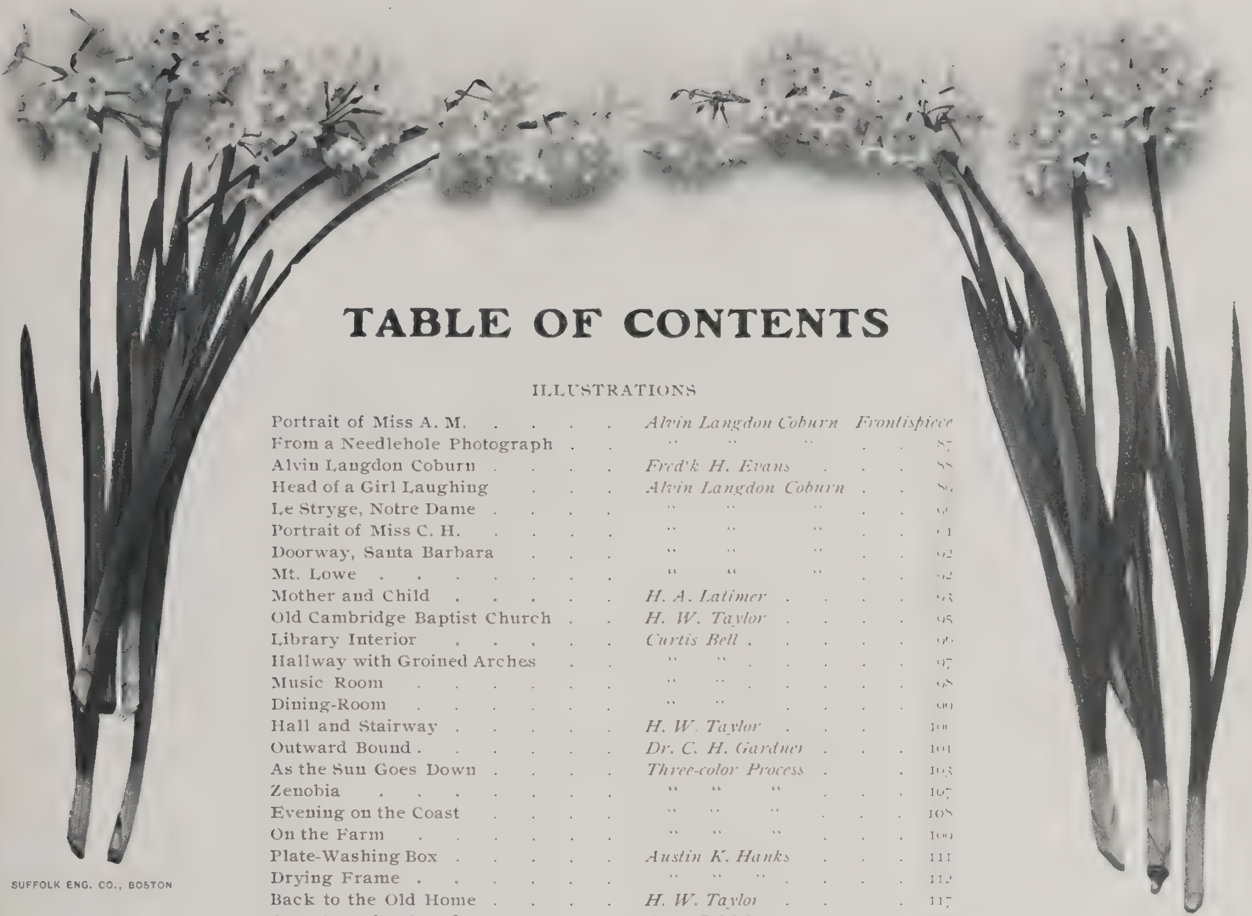
Photochemistry is represented by Section IX, and it is hoped that all Americans interested in photochemistry will become members of this Fifth Congress. The fee for membership for Americans is $4.35. Members will receive the full printed reports of the proceedings and all the papers read during the session. This publication in itself will be a very important one.

All American photochemists are requested to present papers on photochemical subjects. If they cannot go to Berlin themselves, these papers will be read by Dr. Leo Baekeland, who is the chairman of Section IX on photochemistry.

All correspondence on this subject, or applications for membership, can be addressed to Dr. Leo Baekeland, "Snug Rock," Yonkers, N. Y.

Cover Stock We are pleased to call attention to the artistic work now being done by the Niagara Paper Mills in the manufacture of cover stock and photographic mounts. They have recently added three new colors to their now famous line of Sultan covers, characteristically named Omar (light brown), Mecca (light gray), and Kazak (light green), the first of which covers this issue of the Photo Era. These papers are the result of considerable technical experimenting on the part of their expert colorist. We are informed that they are absolutely fast to light, are well balanced between a warm and cold shade, and of a sufficient neutrality to take kindly almost any combination of ink. We believe that they are going to be of the utmost usefulness to those who are looking for original and effective possibilities in photographic mounts and printing.

Cyrus Cobb, Sculptor The death of Cyrus Cobb, the well-known sculptor of Boston, will come as a shock to many photographers and artists to whom he was a familiar figure. Together with his twin brother Darius, the painter, he early took up the cudgels in behalf of photography in its battle for recognition as a fine art. They were constant attendants at photographic exhibitions of late years, and their pictures, owing to their venerable and picturesque appearance, adorn the walls of many of the leading photographic studios of the country. The service they have rendered the cause of photographic art is great, and the Photo Era is glad to pay this tribute of acknowledgement to both the living and the dead. Their gallant battle together for the recognition of a native American school of art, as distinguished from the foreign school and its influences, though it has alienated some, has won for them many friends.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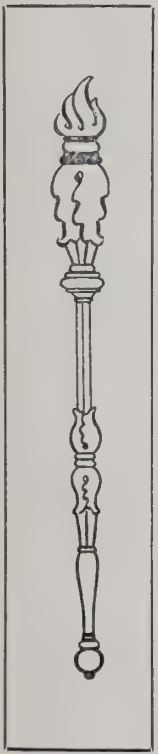

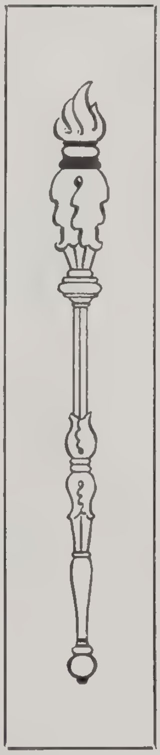

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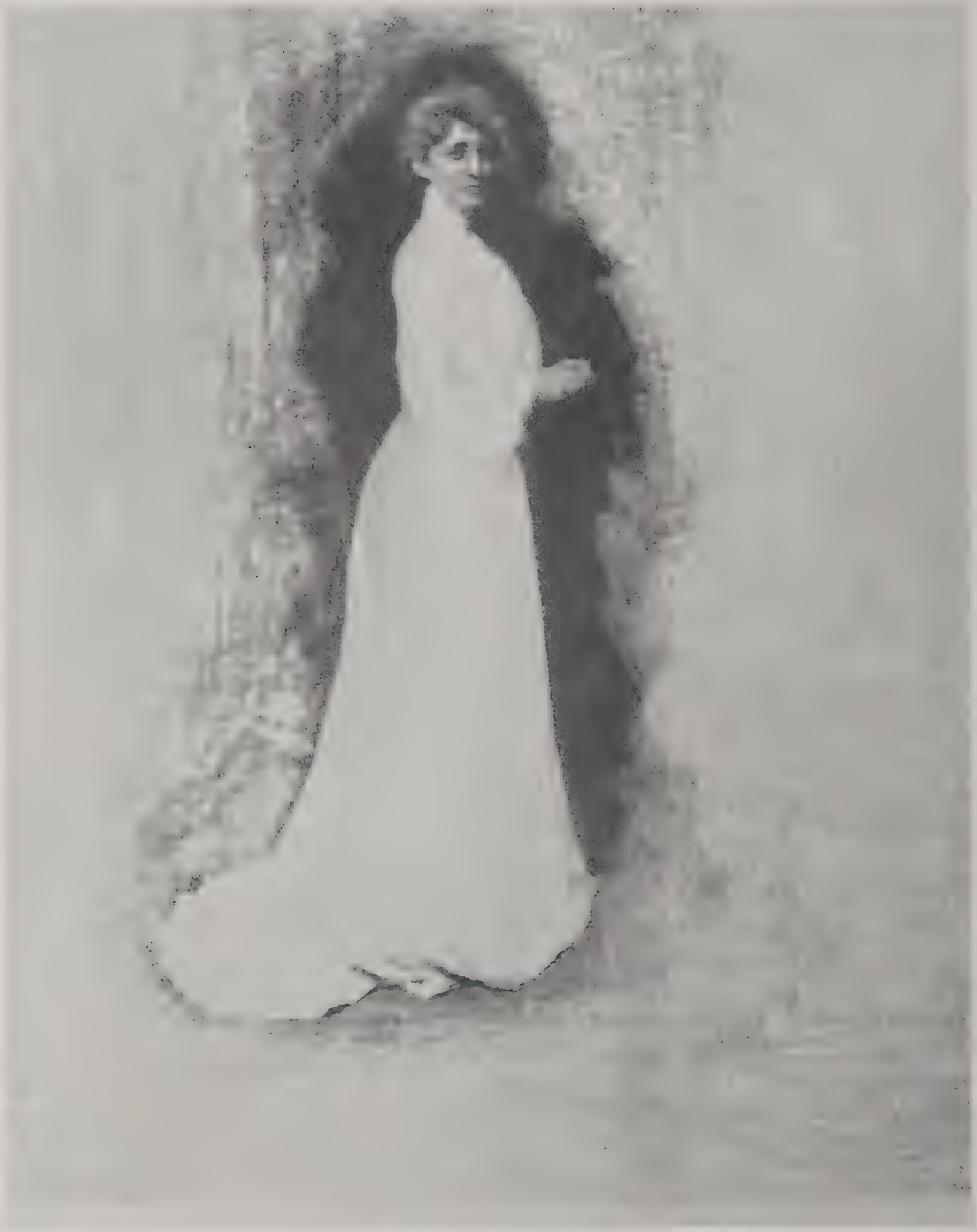


PORTRAIT OF MISS A. M. By ALVIN LANGDON COBURN.

PHOTO ERA

Frontispiece for March, 1903

PHOTO ERA

The American Journal of Photography

Volume X MARCH, 1903 Number 3

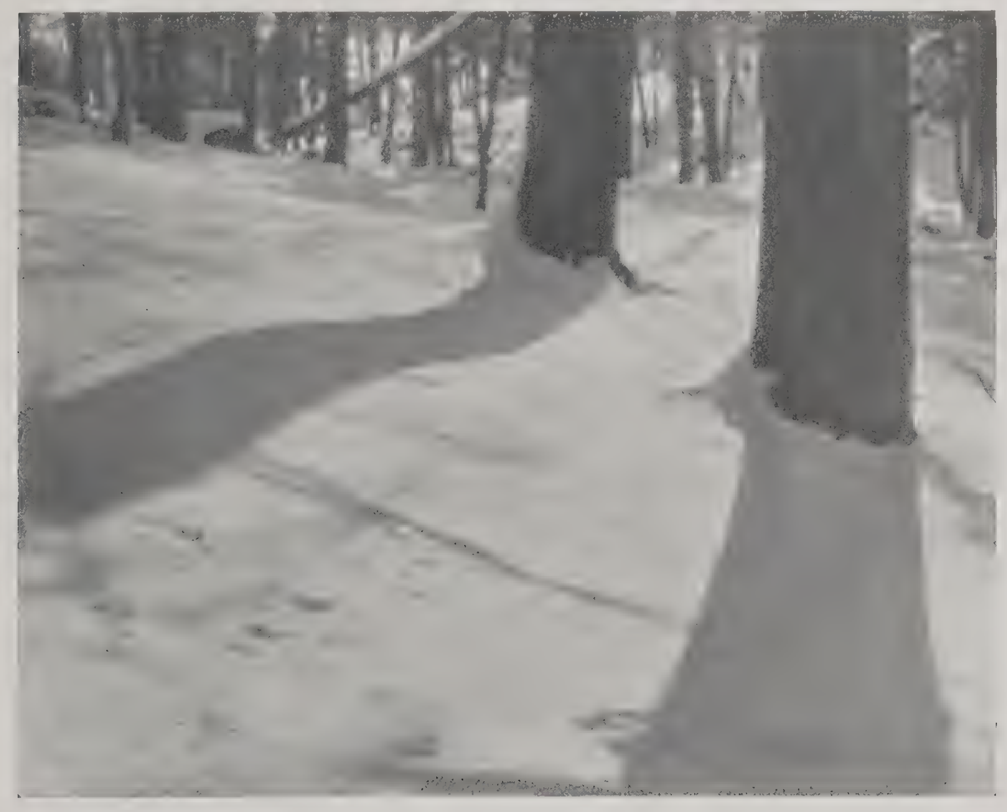
March

Ah! passing few are they who speak,
  Wild, stormy month, in praise of thee!
Yet, though thy winds are loud and bleak
  Thou art a welcome month to me.
— Bryant.

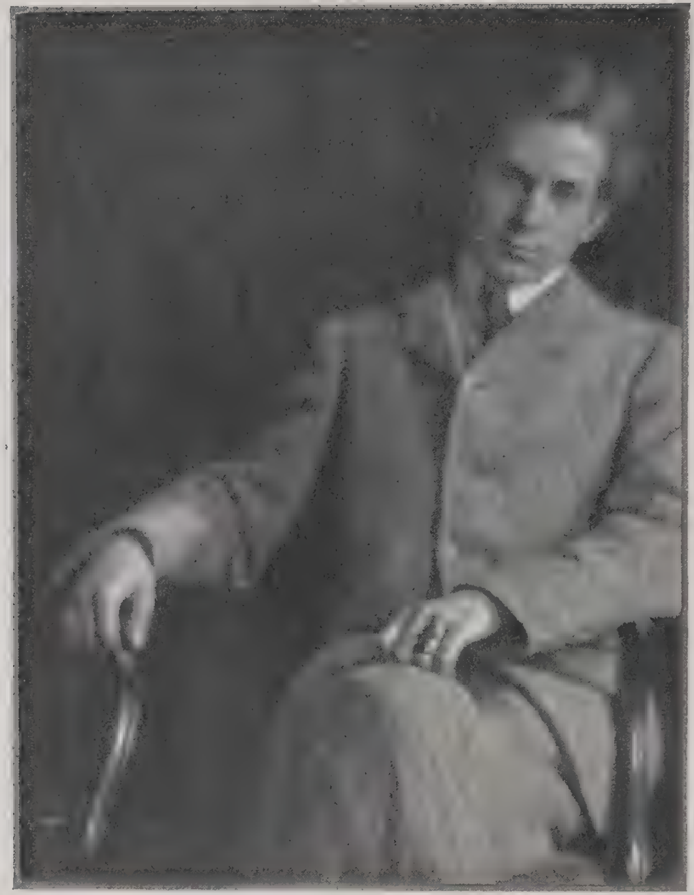
Some Photographs by Alvin Langdon Coburn

THOS. HARRISON CUMMINGS

THE ability to make expressive and artistic photographs is not a common possession, as some might think, but a rare gift, and the reason is plain. To reach the highest levels in artistic photography one should have not only more than the usual skill in craftsmanship to produce photographs that have fine qualities of technique, but, in addition, there should



From a needlehole photograph. By Alvin Langdon Coburn.



ALVIN LANGDON COBURN. By FRED'K H. EVANS, London.

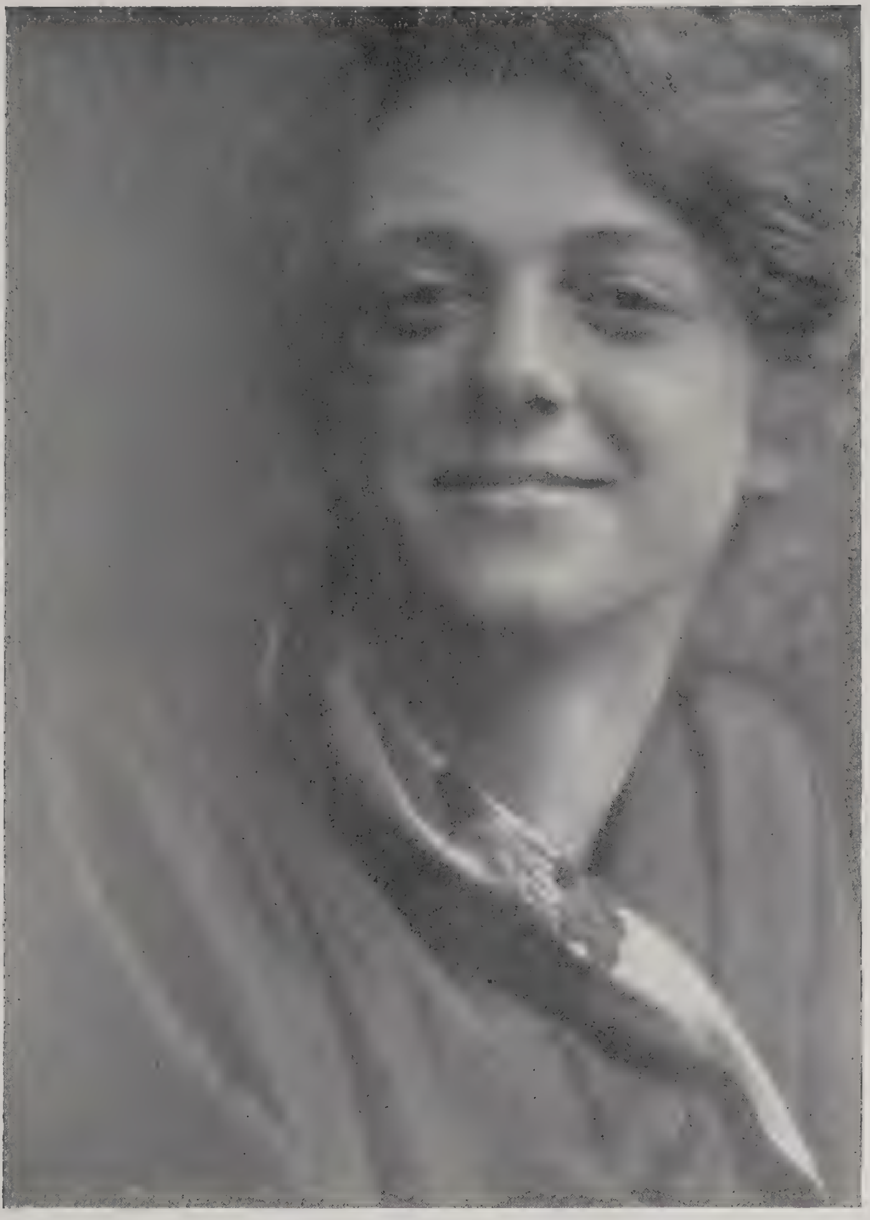
also be æsthetic intelligence, which is the mental capacity to appreciate and reproduce the salient features of a subject in portraiture, or the delicate subtleties of an effect in landscape, marine, or genre work. We all know some pictures that are built up scientifically, step by step. Little by little the photographer proceeds, collecting first the fundamentals and then building upon them with facts and details until the complete result is achieved. Such a picture may be valuable for its sincerity and scientific accuracy, and the depth of thought it may reveal. Yet it falls short of being an artistic photograph because it lacks the charm of spontaneity and the grace of unconsciousness. But when the artist is possessed of a soul open to impressions, and trusts his impressions rather than his technical ability, his pictures are sure to be of a different character.

They may lack technical excellence, but they are sure to be pleasing and attractive, because they reflect the dainty waywardness of nature, to whom they owe their inspiration. They express the artistic aspirations of the photographer rather than the mechanism of his professional methods, and they summarize all that is necessary to give meaning and vitality and artistic excellence to pictures, viz., artistic feeling,—soul.

These ideas have been suggested by the recent exhibit of pictures given by Mr. Coburn before the New York Camera Club, and now being shown at his new studio, 827 Boylston street, Boston, during the month of March.

These pictures, as a whole, show wonderful versatility on the part of the artist. He is a worker who combines in a marked degree the qualities of taste and execution that make for sound photographic work. His judgment in selecting subjects is healthy, his adaptation of material is clever and ingenious, and he has a certain grace of style that individualizes his work and renders it distinctive from that of others.

From what we can gather Mr. Coburn owes little to any of the formal systems of art teaching by which the modern photographer can be prepared, if he so chooses, for doing artistic work. His manner of training has been largely self-



HEAD OF A GIRL LAUGHING. By Alvin Langdon Coburn.

discipline, searching out alone and unassisted the details of knowledge that his profession demanded.

Ten years ago, as a mere boy, he started in with an old 4 x 5 Eastman Daylight loading film camera. As time went on he began to do more ambitious work, and later he studied under the direction of F. Holland Day, of Boston, and of Mrs. Gertrude Kasebier, of New York. Thus he grew up amid teachers and surroundings that would best develop in him the pictorial and artistic instinct. Meanwhile, being anxious to excel as a photographer, he has thrown himself enthusiastically into the work of training himself to rightly understand and express by photography artistic thought and feeling.

His pictures show that he is a sincere student ; that he is deeply impressed not only with the necessity of giving the closest possible attention to facts and details, but also that he must be fully responsive to the spirit and inspiration of the scene or person depicted.

His studies from nature and his portraits from life have a peculiar freshness of interpretation that is very pleasing. He has learned thoroughly the technique of his lens, camera, and chem-

LE STRYGE, NOTRE DAME. By ALVIN LANGDON COBURN.
From an Ozotype.

icals, and he has a rare facility in the management of light and shade for one so young.

To know instinctively what are the fittest things to reproduce is partly a gift and partly acquired. By constant study and comparison he has learned to differentiate between the details that are essential and those that serve no urgent purpose in a picture. This knowledge, added to a natural aptitude in him to choose the right thing, has enabled him to express himself in his pictures with artistic brevity and directness, which some great writer has called the soul of true *æstheticism.*

Furthermore, by experimenting in all the various mediums of his craft he has fitted himself for proficiency in many branches of artistic work.

Among the various processes the gum platinotype method seems to be his favorite method of work. It is a double system of printing; first printing the platinotype and then working the gum. The advantage of this process would seem to be a combination of the detail of the platinum with the breadth of the gum in the finished result. All of Mr. Coburn's mission pictures are excellent examples of this work. But it is in artistic portraiture that he especially excels.

His portraits, as a rule, are well posed and well modeled, the lights being so cleverly managed as to mass the details and conceal the care taken in their presentment.

The years 1899 and 1900 were spent by him in England and on the Continent. The effects of the influence of the foreign schools of photography upon his later work were very marked. He studied technique under Thomas Manley, of London, of Ozotype fame, probably the greatest living technician in England to-day. He met and worked with the Çadbys and Frederick Evans, also of London, whose beautiful architectural pictures are the delight of the photographic world. In Paris, he met Demachy, of gum bichromate fame, Puyo Rene le Begue, and the leading members of the Photo Club of that city. And association with these and other leading lights of the photographic world broadened and strengthened Mr. Coburn's knowledge and sympathies. For, through it, he learned to master the principles underlying decorative composition in his pictures, and this mastery has, in its turn, given breadth, simplicity, and repose to much of his later work.

Composition, as the word is used in art and photography, is defined to mean a general term

MOTHER AND CHILD.
By H. A. Latimer

Reveries of a Photograph

HE who has the courage to face a camera may presume to face a cannon. Though results differ, each may be far-reaching. The cannon may hurl us into eternity and end our career summarily; but the camera may hurl us beyond eternity three or four generations and keep us smiling right on as though nothing had happened. It behooves one, therefore, to stop and consider before putting himself in danger of either; then if he concludes to venture, let him put his countenance in order, so that if he should happen to fall into the hands of the enemy, he may create the impression he died "game" and went to the proper place.

If we face the cannon, there is some slight consolation in the thought, we may be missed; but if we face the camera, escape is impossible: we shall at least be wounded! Herein lurks a danger that must give us pause. For who would live on, and on, in a state of chronic pallor and emaciation, mangled, faded, and hurt beyond recognition? And yet, the average rural album is replete with many such specimens of troubled and suffering humanity.

But there are cameras, on the other hand, that act on the "system" like the "X-ray"; that enhance comeliness and cure defects. These do business. People will patronize doctors who can cure. Certain junior members of the family located such an artist in St. Louis in the person of Monsieur Strauss, and recent treatment has tended to inspire cogitation along this line. We were not a willing subject, but family counsel prevailed, we finally submitted, and our friends insist we are improved,— some say even unto thirty years!

Our objections were not so much to present treatment, as to future possibilities. Who can tell to what use one's image may come, or where it may hang? We remembered seeing in the Accademia delle Belle Arti, in Florence, the celebrated statue of David, by Michael Angelo, exposed to public gaze clothed only with a shepherd's sling! We are persuaded it was not with his own or his family's consent. Prophetic vision inspired him to place himself on record in the 142d Psalm:

> "I looked on my right hand and beheld, but there was no man that would know me; refuge failed me: no man cared for my soul. Deliver me from my persecutors, for they are stronger than I."

We are not ambitious. We yearn not for extraordinary preservation of form or feature, and believe in David's innocence, also.

We acquiesced meekly when instructed to rest our eyes on the northwest corner of the machine; but it is not clear to us what they may rest on in the years to come,— in the event the machine, and the family, withstand the shock. The good Book informs us the gentle Psalmist's eyes originally rested on the Philistine; but when we saw them, they were gazing with a deep and abiding interest at a lunch-basket in the hands of a "new woman" tourist.

Poetic license was then taken with our person. Our chin was caressingly subdued and our neck wrenched, while our jaw was indulged. Our arm was gently assisted to lodgment athwart our vesture and our charm of watch-chain and "Shrine" put in evidence. We were "holding on to the rope," as it were, when the operator reached up and reefed the mizzentop-sail, loosed a jib, tacked a point to starboard when a new and fiercer light dawned on the subject.

It became evident we were to view matters henceforth in this light and from this standpoint. It was equally, even painfully, evident we were by this act inviting inspection and challenging criticism. Then it were high time we were assuming a sort of variegated expression suitable for parlor, drawing-room, library, or loftier locality. For we are to look down the years on descendants, and descendants' descendants, with this same look, as they file by and indulge in remarks anent their ancestor. We must either prepare and execute that look now, or forever after hold our peace. The operator overtook the look we were practicing on, and begged us to reconsider; and, in an unguarded moment, pressed the button, and we are transfixed.

The die is cast, and we are doomed to wear a pleased expression under all circumstances. We may not change our features in all the years to come, but smile right on though the style of our clothes be called in question, or the facetious visitor indulge in remarks relative to our old twentieth-century coat, photographed in black and white, probably before color photography was in vogue. We may want to cry out at sweet nothings whispered in our presence; or howl during the practice hour; or weep at sight of the dead face of one they vainly imagine has gone up, our way; but we smile on in the same old way, with dust on our nose and cobwebs in our ears, and look content and happy.

But however much we may exert ourself to keep up appearances and hold our place in the back parlor or spare bedroom, one dark rainy night the cord breaks, and our picture takes a tumble. The dust swaps places with the cobweb, and our whole constitution suffers a general shaking up. This, together with the "bad luck" precipitated on the family by our fall, causes it to be decreed that we be forthwith deframed and relegated to the attic. Nobody remembers who we are anyhow; and we were allowed to remain as long as we did only because our antique frame harmonized with the cabinet mantel, and covered an ugly hole in the fresco. And then the exquisite work of the artist was much admired.

So we take up an uncertain abode in the attic, there to smile on antiquated furniture, old clothes, swings, doll-rags, doll-houses, etc. Second childhood comes on apace. A rainy day drives the children indoors, and they gather in the attic. A pair of rusty scissors in the hands of an infantile prodigy makes "paper dolls" of a lot of us ancients and we smile again as we play "come-to-see" with our great grandmother!

Industrious rats, attracted by the paste and cajoled by the smile of the old photo, follow the children; and in a few short hours that twentieth-century coat, that benign countenance, that charm of watch-chain and smile,— tattered and torn, weary and worn, lacerated and masticated, — finally disappears among the innocent ratlets of a rat's nest,— to their utter discomfiture and final extermination, Then,— then, comes a demand for our picture.

OLD CAMBRIDGE BAPTIST CHURCH. By H. W. TAYLOR.

Interiors, by Daylight and Flash-light

HERBERT W. TAYLOR

THE photographing of interiors is a branch of our art-science which appeals to the lover of truly beautiful effects, leading as it does to the study of esthetic arrangements of the furnishings of a house and the most judicious placing of pictures, bric-a-brac, etc., together with the innumerable little touches which serve to make an interior both artistic and homelike. Yet I have in mind one house of wealth where such a refining influence was much missed, where the mistress was an enthusiastic collector of old furniture, engravings, and pewter; but her ardor had so far exceeded her judgment that the stately mansion resembled a museum, and there was no one room in which one could sit down and feel that it was home.

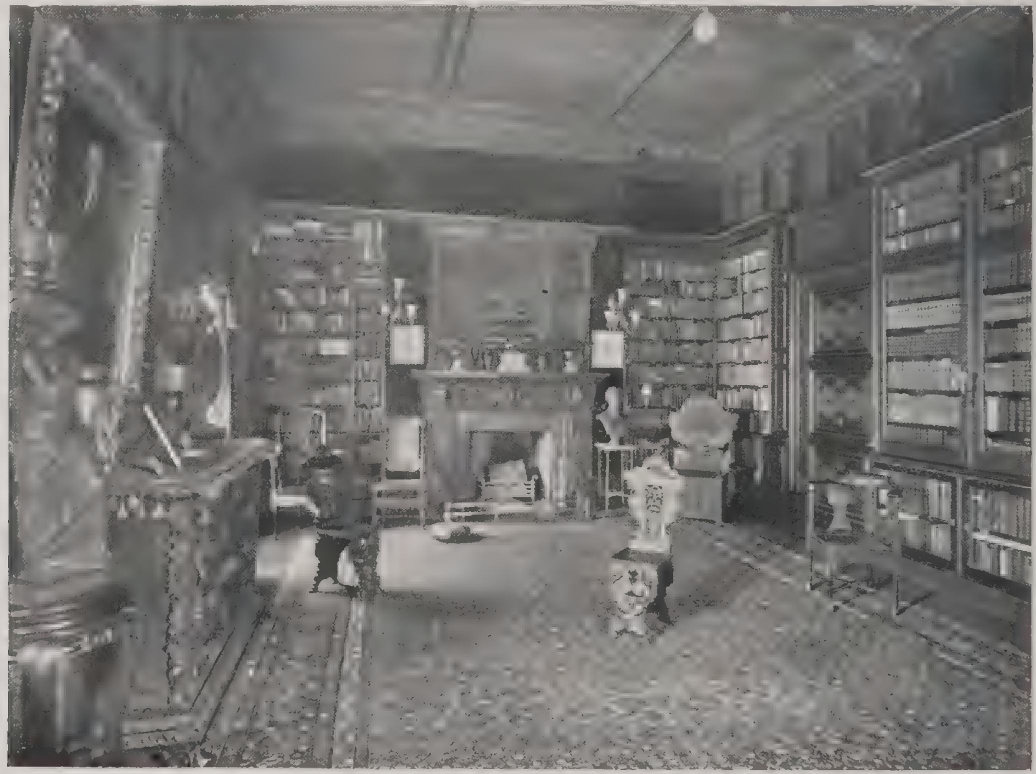
Another house in which I have made photographs is the summer home of a gentleman whose ample means permit the gratifying of a happy taste for beautiful effects. An old house, remodeled to serve the needs of a luxurious bachelor, the appointments are seen to be all in excellent taste — numerous valuable pieces of old furniture placed where there is a sufficient reason for their being; and a fondness for china evidenced by many beautiful specimens displayed upon the walls, but in a pleasing and legitimate style. This long, low room presented a problem to the photographer. Lighted by a row of old-fashioned, small-paned windows, but only dimly lighted because of the comfortable twelve-foot piazza which finds its limits only in the length of the charming old house, the deep shadows on the floor, under the billiard-table, and in the corners, were quite too much for my usual method of daylight exposure.

I firmly believe that daylight exposures render more just values than can be obtained by flash-light, and I understand that the most successful operators in this branch agree with the theory; but in this case the artificial light was a necessity, so I compounded my theory with the necessity. After an exposure by daylight of half an hour, I used a flash-lamp, walking about with it so that the flash should illuminate first one dark corner and then another. By this means my plate was evenly exposed, and the details in half-tone and shadow were well reproduced in the picture, while the long daylight exposure caused the light parts of the room to appear light, and the relative values of light and shade appeared in the print as in nature.

A flash-lamp is undoubtedly the best means for producing artificial light, and I find a decisive advantage in the fact that the light continues as long as you blow through the tube, and that it is suspended immediately upon ceasing to blow, so that it is practicable to move the source of light about from one spot to another, as I have mentioned doing. Of course it will be understood that the light must always be so placed that the flash shall not strike the lens, and another important fact is that nothing but pure magnesium powder can be safely used in the lamp. I make this statement because I have always been so told by men in whose authority to speak I have confidence, and not from my own experience, since I have not dared to use any of the compound powders for fear of accidents by explosion.

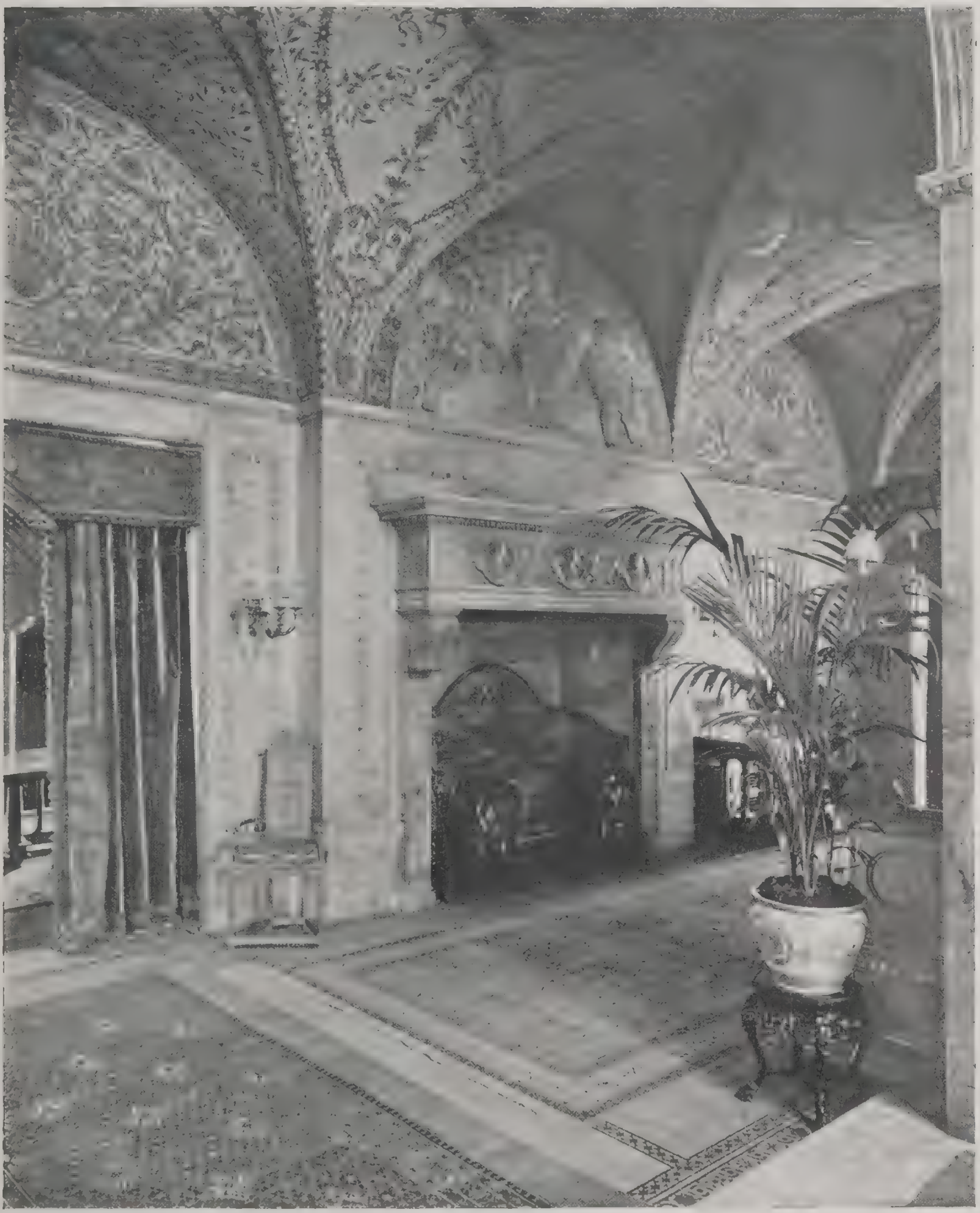
The continuous light from the lamp is preferable to the instantaneous flash of the cartridge, because the view is more evenly illuminated and the plate likewise more evenly exposed when a lamp is used: just as harsh contrasts result from snap-shots, whereas a time exposure under the same circumstances will yield an evener and more pleasing picture. This statement may be tested by making a picture of a group of people by flash-light. We all are familiar with the ghastly faces and unsightly shadows when a cartridge has been used, but try the continuous light from a lamp and see how round and natural the faces will appear; and if this be so with faces, why not also in the details of a room?

Non-halation plates must be used when a window or open door is to be included in the view, and if there be lots of light in the room so that a comparatively short exposure will suffice, the non-halation qualities of the plate will obviate the halo of light around the window. But if a long time be needed, say a half hour, my experience is that the protection afforded by the double-coated plate is not sufficient, and the neighborhood of the window comes out more or less foggy. I am not satisfied to overcome this trouble by waiting until evening to make a flash-light exposure, with the result that the open windows let a mass of inky blackness into the picture, but there is another way which I find to give charming effects. It is to darken the window by hanging a thick black shawl or other opaque fabric over it, on the outside if practicable, or the fabric may be placed on the inside, between the glass and the shade. Having made the exposure, cap the camera carefully, so as not to jar the camera. Next remove the shawl, being careful not to displace the shade or



LIBRARY INTERIOR.

Copyrighted by CURTIS BELL.



HALLWAY WITH GROINED ARCHES.

Copyrighted by CURTIS BELL.

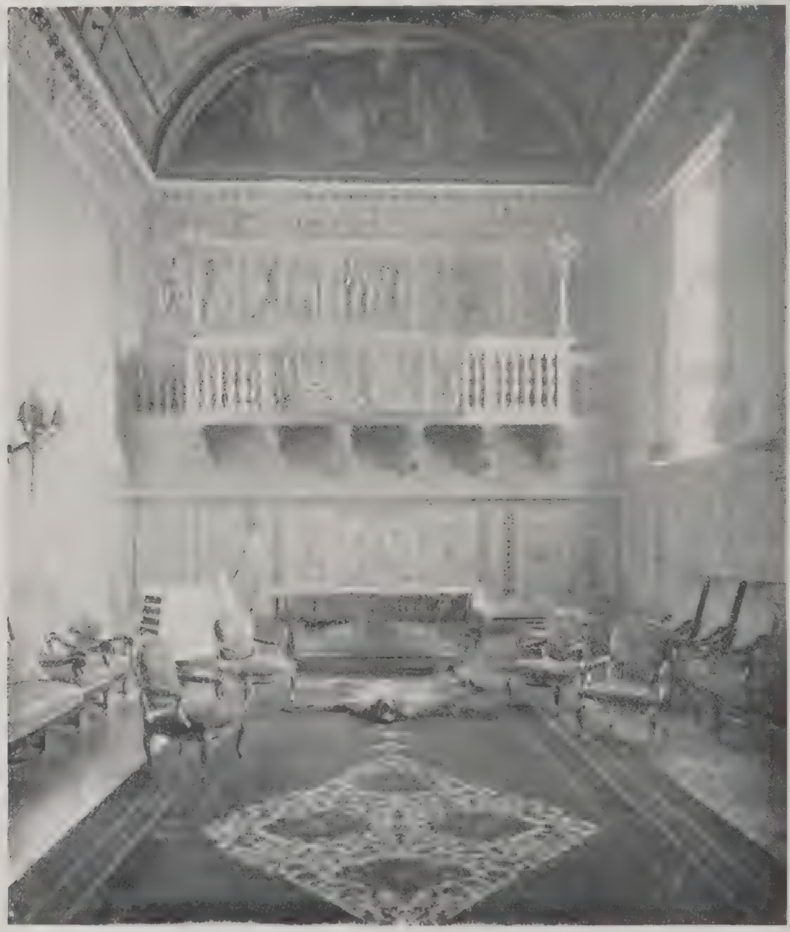
any other detail of the view, and then make a second exposure of perhaps four or five seconds, which will be sufficient with the strong light which enters through the window. The finished picture will not only show the inside of the room, but will let us look out through the window and see the trees and grass, a beautiful little picture within a picture.

The other pictures, those which hang upon the walls, will give trouble from the patches of light reflected by their glasses. This blur of light may be removed by changing the position of the picture slightly with the aid of a match or wad of paper placed behind a corner of the frame. I have noticed of late that some of the book illustrators are showing these reflections in their pictures, but this is a bit of realism which I think will not appeal to photographers.

Mr. Curtis Bell has been fortunate in having handsome rooms to photograph, the four views accompanying this article being in Mr. Whitelaw Reid's New York house. These big, rich interiors would seem to inspire one to produce stunning negatives, and Mr. Bell appears to have got all there was out of his views.

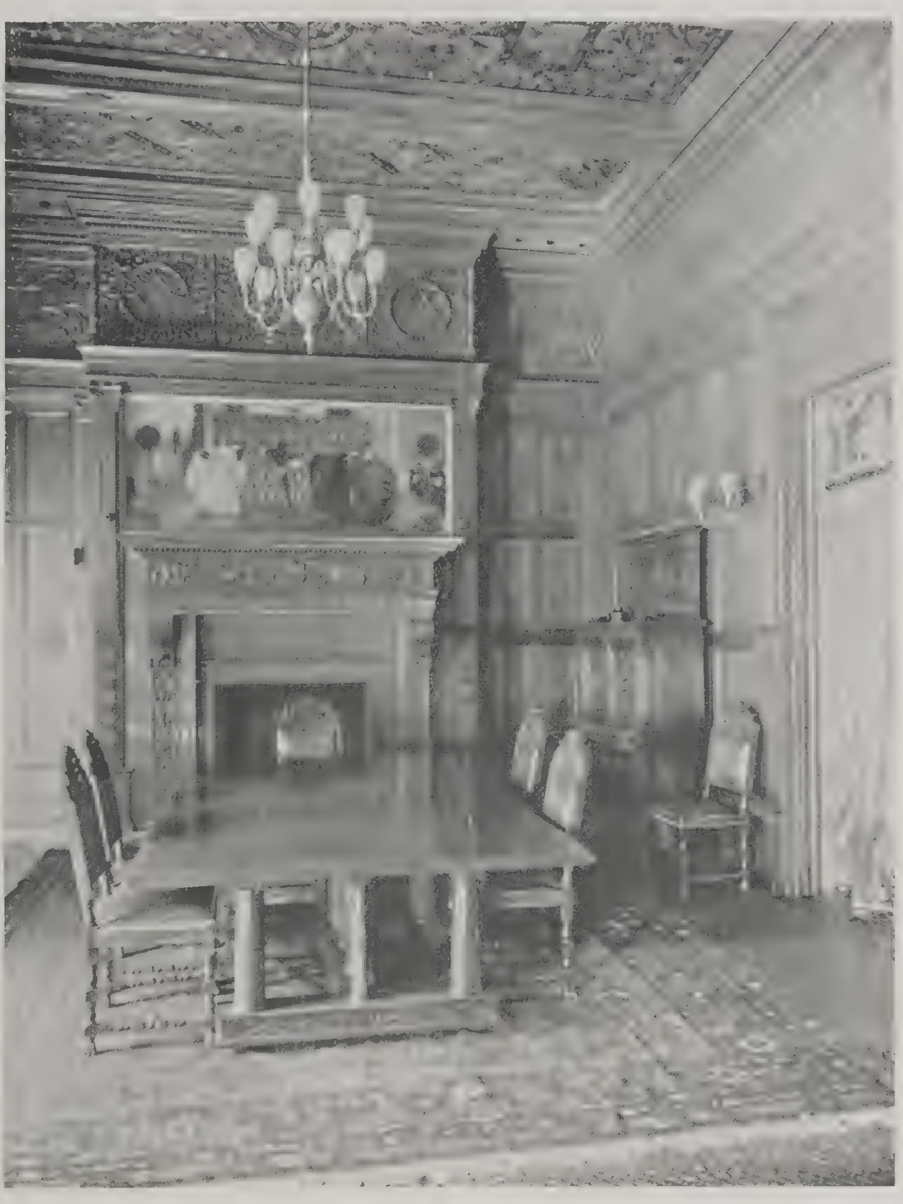
It will be noted that the mirror over the mantel in the dining-room pictures the scene opposite, and it may be pertinent to observe that the camera has been placed at such an angle as to escape representation in the mirror.

The library furnishes the text for another hint to the inexperienced operator. This is the difficulty of focusing the different planes. With the lens wide open it will be found that the nearer objects and those in the distance cannot all be brought into sharp focus, so the middle



MUSIC ROOM.

Copyrighted by Curtis Bell.



DINING-ROOM. Copyrighted by CURTIS BELL.

HALL AND STAIRWAY. By H. W. Taylor.

distance may be focused and then the smallest diaphragm inserted, when it is to be hoped that the whole view will become sharp. However, the illumination of the ground glass will be so slight with the small stop in that it is well to place lamps or candles in different parts of the room, and to make sure that everything is in sharp focus by noting the degree of clearness with which the lights are seen. The test of the focus is on the edges of the plate, where the Venus is seen in this view, or the books on the extreme right. These negatives are the result of long exposure by daylight.

My own pictures of the colonial hallway and of the church were both done by daylight, with Seed's non-halation plates and a Euryscope wide-angle lens working at the smallest aperture which this lens affords. The hallway was exposed about half an hour and the church was done in fifteen minutes.

The windows in this church are of a light, stained glass, and the illumination is quite brilliant so that a shorter exposure was sufficient than would be required in an edifice wherein the light was more subdued.

I remember that snow was falling during the exposure for this picture, but I have a stronger recollection of ascending to the elevation from which the view was taken by means of a rude ladder affair between two partition walls. Rumor has it that the church sexton, a man of more goodly proportions, once spent some time between these same partitions, until his cries brought assistance to squeeze through. But then, he was not there in the service of art. In fact I don't know why he was there anyway.

The Catatype, an Epoch-making Photographic Discovery

FRANK R. FRAPRIE

It is now more than a hundred years since the discovery of the remarkable effects which some substances appear to produce in certain chemical reactions by their mere presence. The quantity of these substances does not change, and they are not used up, but only when they are present does the reaction occur to a measurable degree. The first case of this kind was observed about a century ago by a German apothecary named Kirchhof. It was the change of starch into sugar by boiling with dilute acid, a process which now finds widespread technical application. Many other such reactions were soon discovered, and Berzelius named the process catalysis. Although many attempts were made to solve the riddle, no explanation of catalysis was found. In recent years it has been one of the favorite research fields of physical chemistry, and notably Professor Ostwald and his scholars at Leipzig have studied the phenomenon with such success that most of our present knowledge of the subject is due to them.

In 1901 Professor Ostwald said at Hamburg before the 73rd Congress of German Naturalists and Physicians: "That also in technical fields the scientific knowledge and mastery of catalytic phenomenon must have results at present undreamed of, is already evident from the chance applications of this process. . . . When one considers that the acceleration of reactions by catalytic means takes place without the application of energy, that is in a certain sense gratis, and that in all technical processes, chemical included, time is money, we see that from the systematic use of catalytic aids we may expect the most radical changes in technical chemistry." What is here so clearly promised for the future, Professor Ostwald and Doctor Gross have now given us in the form of catatypy, by which name the discoverers designate their recently published process for manifolding without light photographic and other pictures in which the image consists of any of those substances which we designate as catalysers, such as silver, platinum, manganese dioxide, etc.

This discovery is designated by them as photography without light; but this is not quite exact, as the making of the negative is done as formerly in the camera on a silver-bromide plate. It is, however, not necessary that this should have a transparent support, such as glass or celluloid, since only the surface of the developed picture is afterwards used. When the photographer, however, has left the dark room with his negative, he no longer needs either to shun or avoid light, as all further processes are completed without its help or influence.

Of the numerous possible ways of reproduction by catatypy, we will give only one example. The completed negative is flowed with a solution of hydrogen dioxide in ether. After evaporation of the ether this leaves a uniform layer of dioxide. The silver of the image immediately attacks this, and causes a catalytic decomposition into water and oxygen in all places where silver is present, while hydrogen dioxide remains where silver is absent. Thus an invisible "image" of hydrogen dioxide is formed. By contact and pressure this image is transferred to ordinary paper in a few seconds or minutes, and can then be developed in manifold ways, for instance, with a solution of ferrous sulphate. This gives a weak iron image, which can be colored blue by red prussiate of potash, violet by gallic acid, greenish-black by pyrocatechin, or many other colors by suitable reagents. As may be seen with the lens, this image gives all the details of the negative in their original sharpness. Since many of these colors are exceptionally stable (the gallic acid picture consists of ordinary ink, which is well known to be stable for centuries), the question of the instability of the print is excluded from consideration.

This process serves only as an example, for it is merely one of hundreds which are possible. The discoverers have amused themselves by making catalytic prints from pictures by every known photographic process, including half-tone illustrations printed in ink, and have succeeded in every case. This is natural, for all processes used in photographic printing are applications of reactions which run to an end by themselves, and are merely hastened by the action of light, the speed of which can therefore be increased by catalysers; and there are besides a much greater number of substances and reactions which act catalytically than of those which are influenced by light. Simultaneously in all cases an extraordinary simplification of the operations occur; for example, on commercial carbon tissue, without any sensitizing, a print ready for development in warm water can be prepared in two minutes.

The results of this discovery can at present be but imperfectly anticipated. We may infer that there are but few reproductive processes which

OUTWARD BOUND. By Dr. C. H. Gardner.

Taken at 6 P. M., in bright sunlight, with R. R. Lens.
Stop F : 16 and 1-25 sec.

will remain unaltered, and also that many new applications are in prospect. These depend on the fact that the preparation of a negative for catatypic use costs no more than that of an ordinary bromide enlargement of the same size, and that for its reproduction no costly materials or machines are necessary. So artistic, scientific, and technical prints of a size and cheapness hitherto inconceivable become possible. Probably, also, the problem of large three-color prints, at present so much agitated in photographic circles, will receive an unexpected and welcome solution.

In most inventions chance plays the greatest part, but here is a discovery which is a genuine child of science. Professor Ostwald and Doctor Gross are therefore doubly to be congratulated, for seldom has a problem been so clearly defined, and very rarely are the scientific results of an investigation into the secrets of nature so brilliantly useful technically.

The Apostle Camera

C. H. CLAWDY

A FRIEND of one of our contributors walked into the editor's office the other day with a request that we give our attention to what he called an "Anti-camera crusade." He informed his patient auditor that his small son had lately become possessed of "one of those devilish kodak things," and now, by the great horn spoon, he wanted to study art! It was mildly suggested to the irate parent that sons have, on occasion, done worse things, but a muttered malediction was the only result. He did not give us time to tell him what we really thought of the matter, so we are going to do it now.

In our opinion, there is no greater factor to-day than the camera as a means of education. We do most emphatically believe that the closer man gets to nature the more he knows, the better citizen he makes, and the more competent he is to bear his part as a unit in the great machine — humanity.

And the camera is the thing that sends a man out into the country, that makes him walk and look — not walk and think about his business. It sends some of its devotees down close to the ground for insect pictures, others it makes climb trees for birds, to others it holds out inviting hands calling them where ocean breezes blow, and to one and all it exercises a fascination and a mysterious charm which breeds, often from nothing, an appreciation and love for the beautiful without which no one can truly say "I have lived."

In education, the camera is a bigger man than the superintendent of schools. Bringing far scenes to the text-book page for the edification of the child to whom pictures are everything, and print a to-be-avoided evil, telling a story in scenes from the North or South, and making real to little minds the difficulties and dangers which the explorers and the vanguard of civilization have to face, it is playing a part in the better education of mankind that may well require an admiration and a reverence but little second to that which the world pays to the inventor of letters and of books.

So to that dissatisfied father whose son of sixteen was so broadened that he knew his ignorance and asked for an art training, and to all that multitude of parents whose children use the camera to the alternate amusement and disgust of the household, we would commend a little educational reading, a subscription to a photographic magazine, and a careful repression of oppression of the camera. It does no harm, it does great good — it is not a waste of time,— it is an educational recreation, and, last but not least, it is not a "monomaniacal pursuit," but a broadener and deepener of the mind, and as such is to be encouraged and smiled upon.

Daguerre, Salutem ! — The American Inventor.

AS THE SUN GOES DOWN

The Three-Color Photographic Process

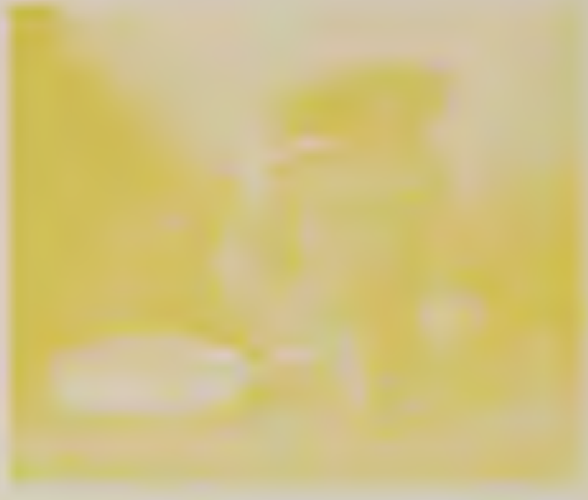
DAY—BAKER

Editor's Note. — In our June, 1902, issue we published an article, by Mr. Day-Baker, entitled "The Commercial Application of Three-Colo Photography." The text was illustrated by a number of colored plates, produced by the process described. The subject proved so popular that our edition was exhausted, and we have had many requests for the reprinting of the article, or other papers on the same subject. That we might meet the demand o our readers, we requested the author to enlarge on his June article, illustrating in greater detail the interesting process. Of a necessity, portions of th previous article are repeated in this paper, in order that the reader may understand the fundamental principles of the process.

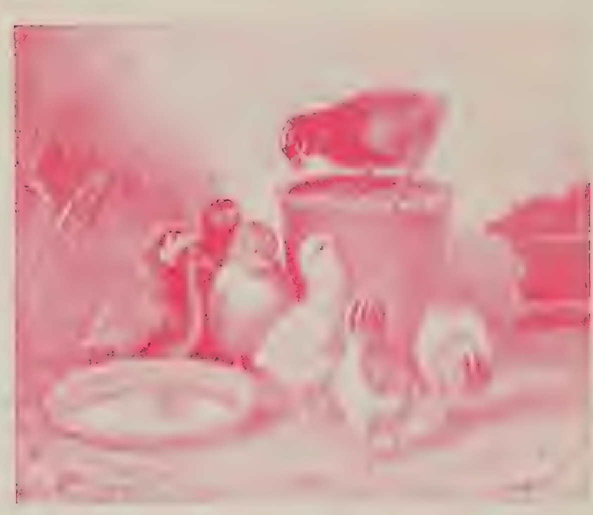
THERE has been and always will be a demand for illustrations in colors. The fact that colors more faithfully represent the subject portrayed was recognized centuries ago. The Egyptians, as early as 2000 B. C., executed pictures or carvings on the walls of the buildings, and on the sarcophagi or burial cases of their dead, and then colored them with pigments, which, in many cases, have endured to the present. From that time this desire for pictures, images, and designs in color, has continued, ever increasing as the years and centuries rolled by.

Did you ever notice the man at a news-stand looking for a book or magazine? He scans the list, opens two or three and hurriedly runs through the pages. If one of the publications be illustrated in colors, almost invariably it is the one purchased. This is an every-day occurrence. We all love colors — they attract; and whatever attracts has a commercial value aside from its artistic worth. The magazine and book publishers are realizing that the successful sale o their illustrated publications requires the introduction of color, and they are responding to this demand as fast as the state of the art of color reproduction will allow.

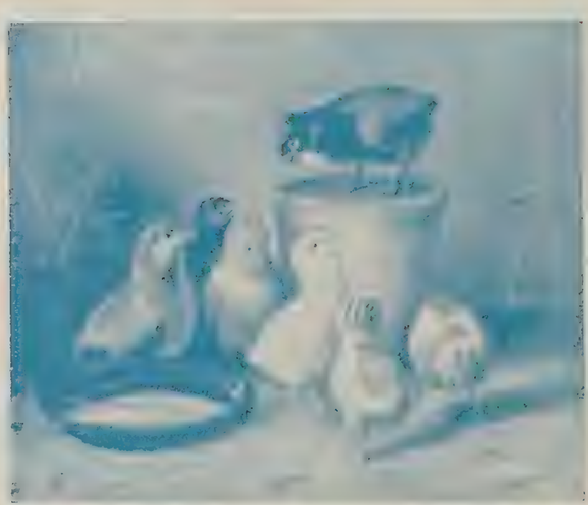
It is this incessant call for pictures, photographically correct, and in their proper colors, that has brought into existence the Three-Color Photographic Process. The chromolithograph has, until quite recently, been considered the only practical medium for the production o



Impression from Yellow Plate.



Impression from Red Plate.



Impression from Blue Plate.

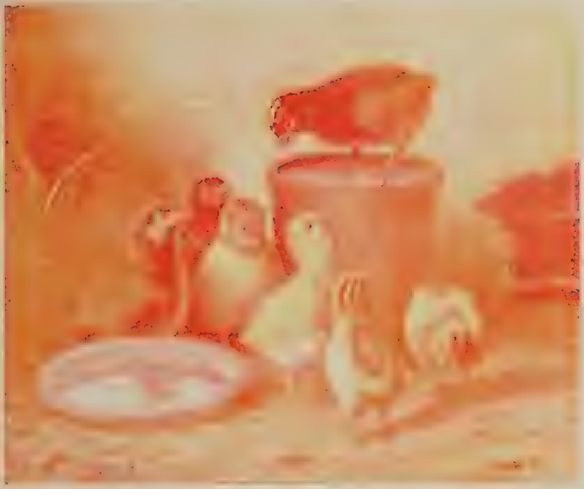
colored illustrations. This process requires from seven to seventeen or more printings from stone, using as many colors and tones of ink. The drawings on these many stones are very expensive on account of the skill required by the lithographic artist.

We all know that the colors of the solar spectrum which we call red, orange, yellow, green, blue, and violet, can, by combination, or with the introduction of white, be made to produce any color or shade. Sir David Brewster announced the discovery of the fact that the primary or fundamental colors consisted of red, yellow, and blue; and that all others could be produced by combination. From a scientific standpoint this is a mistake, as no mixture of these colors will produce white. However, it is possible, by various combinations of these three colors, to make, with the addition of white when required, a sufficient number of colors and tints to produce illustrations of a high class, in which the colors approach closely those of the original.

It is not the intention of the writer to give an extended or technical description of the intricate operations necessary to produce the exquisite three-color work of to-day. It has taken years of hard work, constant study, and experiment, to bring the art to its present state; and while the results are wonderful and almost incomprehensible to the layman, they do not satisfy the enthusiastic colorist who is ever seeking his ideal. Improvements are constantly being made in the color screens or filters, the specially sensitized photographic plates, the lined screens for making the photographic impression of the color sensations into printing-plates, the chemical composition of the inks, and the presses for printing the plates. The technical description of the processes, their workings, and the theories advanced by the many workers in the fascinating art would make altogether too dry reading for this article.

Of the many experiments and processes introduced in this country, only two have proved to be capable of giving practical commercial results; and it is an open question if one of these does not really embody all the valuable features of the other. In this paper we will therefore only consider the inventions and experiments of Mr. Ives and Dr. Vogel.

In 1881, Mr. Frederick E. Ives, of Philadelphia, after much patience and experimenting, produced the first three-color process illustrations in this country, by means of what is now known as the "Ives Process." In 1885, he exhibited his method and results at the Novelties Exhibition of the Franklin Institute, Philadelphia. All of the Three-Color Photographic Proc-



Impression of the Red Plate over the Yellow Plate.

ess printing in this country to-day is done practically by an adaptation of the "Ives Process."

In 1885, Dr. H. W. Vogel, assisted by his son, Dr. Ernest Vogel, commenced his experiments at the Royal Polytechnicum in Berlin, Germany; and a few years later was able to produce, by photographic and printing processes combined, very successful reproductions of paintings and still life in natural colors. This method was brought to this country in 1892, by Mr. William Kurtz, of New York City. This process has since been known here as "The Kurtz Process."

Both of these trichromatic, or three-color processes depend upon the photo-mechanical division of the light reflected from the article or painting to be reproduced, into the three primary or fundamental colors, — yellow, red, and blue. This is done by photographing on three separate plates that have been especially prepared so as to be sensitive to the rays of each color, and, during the exposure, cutting out all rays but those of the desired hue, by means of screens or light filters, interposed between the object and the photographic plate. In making the negative of the yellow values, a screen composed of red and blue coloring matter is used, termed a violet filter; for the red values — a green fiter (yellow and blue); and for the blue values, an orange filter (yellow and red).

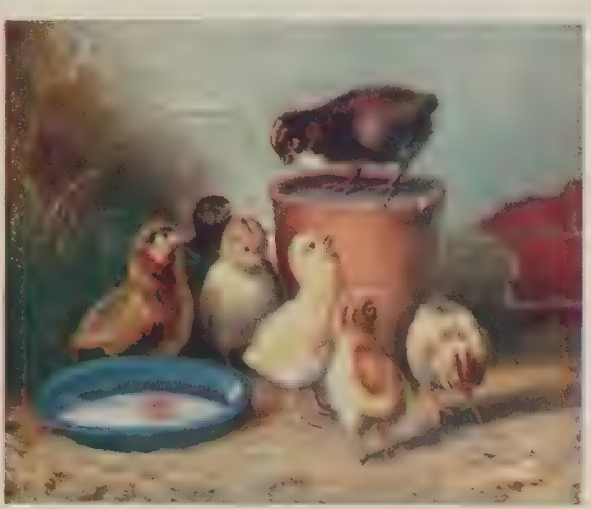
Wonderful as it may seem, it is a fact that these plates not only take the three primary colors as they appear in the original, but also such portions as enter into combination with other colors to make the various tints.

After the negatives representing these three primary colors have been obtained they are used for making reversed photographic prints of each through a lined screen, on previously sensitized copper. The copperplates are then etched, leaving only those parts designed to convey color of the original height of surface. This transforms the values of the three-color negatives into copper printing-plates.

These plates are proved and re-etched to obtain artistic and good printing values, and are then turned over to the letterpress printer who can now make reproductions in the original colors in almost unlimited quantities.

In connection with this article a variety of illustrations are given. For the purpose of making this paper clear, colored proofs of the three separate color-plates, as described above are shown; an example of the red plate printed over the yellow; and a completed print of the three colors; all of the same subject. These plates are printed in practically the same manner as magazine illustrations, except that three printings are required. First, the yellow plate is printed, then the red, and lastly the blue; this completing the picture in all its natural colors.

The printing of the color-plates is almost an art by itself. No careless printer can produce satisfactory results. The work of the artist photographer and plate-maker must be supplemented by the careful and skilful labor of an artist printer. As the plates reach the pressroom from the hands of the photo-engraver they are thin copper slabs, covered with the finely etched engravings, which seem like a mere breath on the highly polished surface of the metal. These plates must be applied to a block to make them the proper height for the printing-



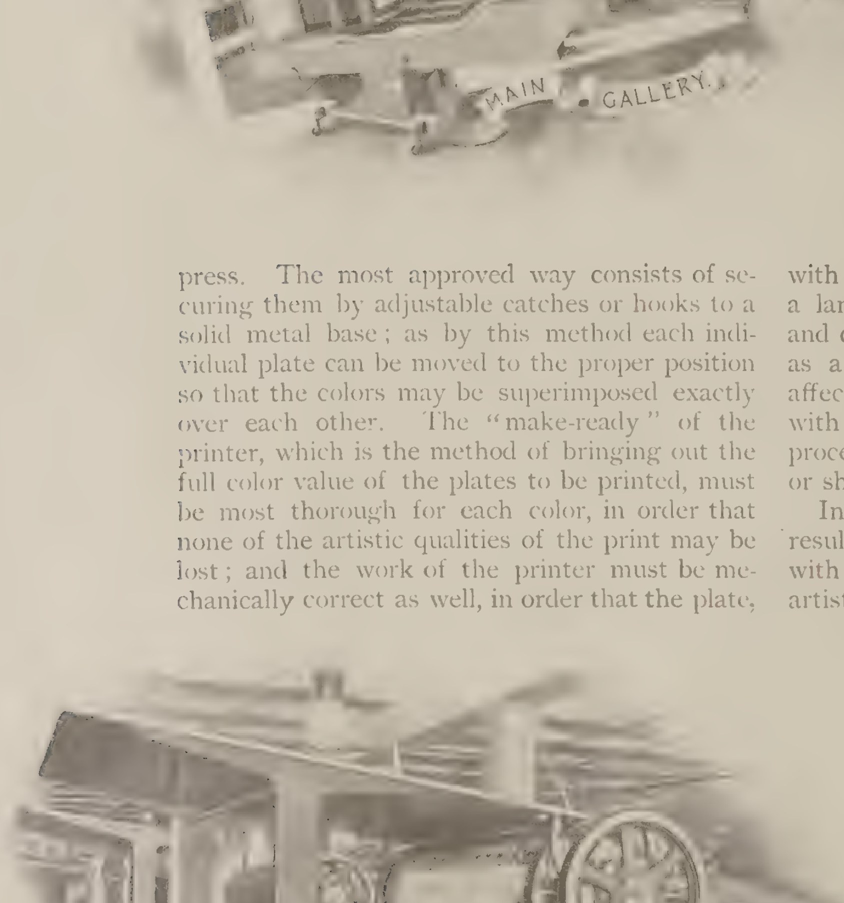
COMPLETED PRINT.

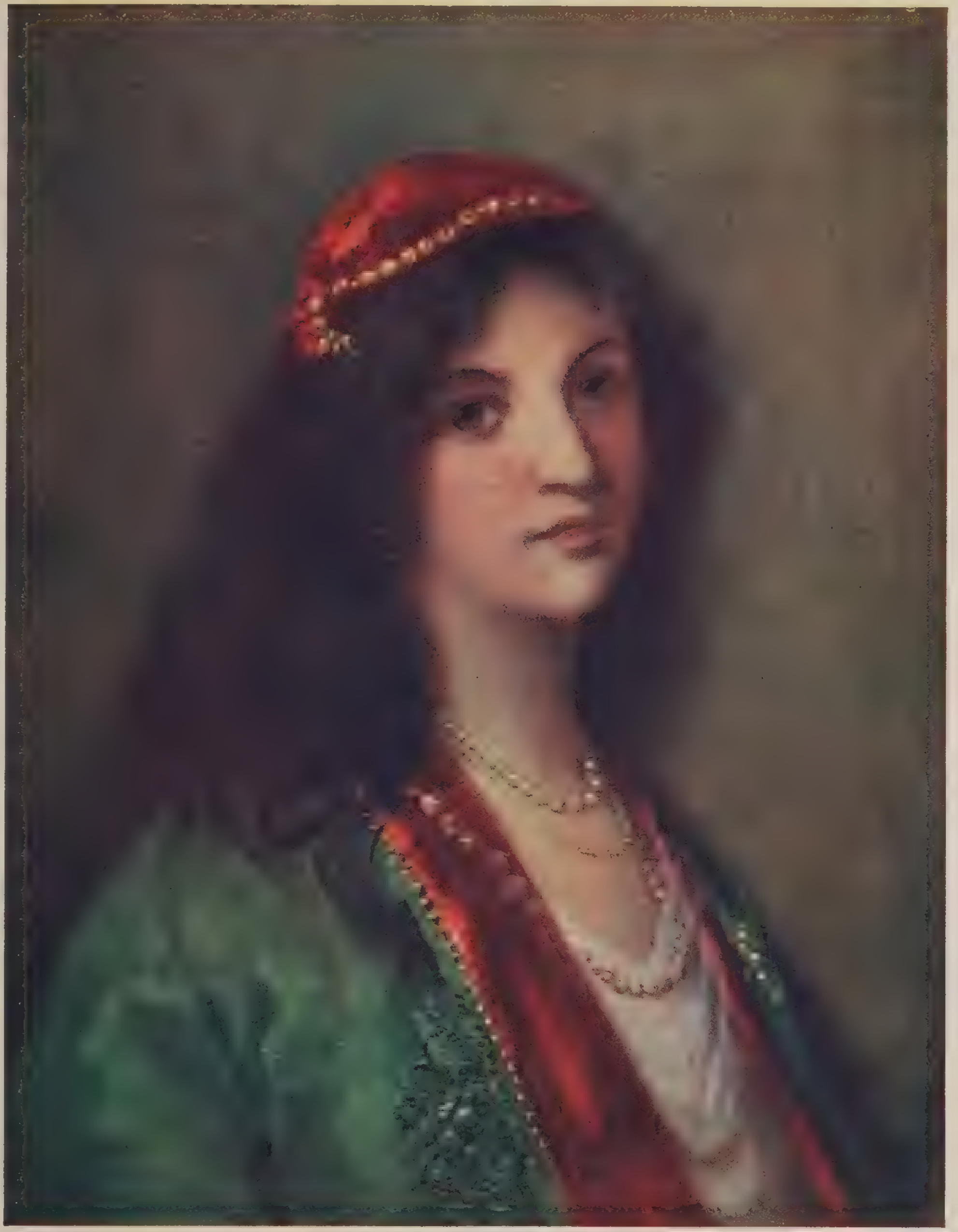
Impression of Yellow, Red, and Blue Plates combined.

press. The most approved way consists of securing them by adjustable catches or hooks to a solid metal base; as by this method each individual plate can be moved to the proper position so that the colors may be superimposed exactly over each other. The "make-ready" of the printer, which is the method of bringing out the full color value of the plates to be printed, must be most thorough for each color, in order that none of the artistic qualities of the print may be lost; and the work of the printer must be mechanically correct as well, in order that the plate, with its delicate tracery, may without wear give a large number of impressions. The amount and color of ink must be very carefully watched, as a variation in the supply will surprisingly affect the finished product. Care must be taken with the paper before and during the printing process, in order to prevent it from stretching or shrinking; either being fatal to good work.

In order to produce an artistic and practical result, each step of the process must be executed with fidelity and skill: most accurate plates, artistic etching, the best paper, the most transparent ink are required; and last and most important the printer must possess printing-presses that "register"; that is, the machine must be so accurately made and adjusted that when a sheet of paper is printed a number of times, the lines and dots of an illustration will fall in exactly the same place on the sheet each time the paper is printed, or run through the press. Errors in photographing and engraving can, in a measure, be corrected; but should the press fail to register, all the skill of the photographer and engraver is lost.

Some idea of the versatility of this process can be formed when it is stated that all the subjects on the eight pages of this article were printed on one sheet, in three printings, using only the three fundamental colors.


THE LARGE COLOR PRINTING-PRESSES.



"ZENOBIA"

Made direct from Oil Painting by Three-Color Photographic Process
by Electro-Tint Engraving Co., Philadelphia.

The practical application of the three-color process is almost unlimited: exquisite book and periodical illustrations, cover designs, calendar headings; reproductions of paintings for commercial purposes, interior decorations, groups of merchandise, bird life, etc., can all be made.

Portrait work has not been practically accomplished by this process, but it is one of the features that will undoubtedly be solved by some persistent photographer. Our German coworkers have already produced landscapes that are remarkable, not only for the exquisite detail they possess, but for the wonderful colorings. In these three-color photographs the trees, the buildings, the water, the sunlight and shadow, are all depicted in such realistic stereoscopic effect that one could almost imagine himself viewing the country shown on paper.

Perhaps one of the widest fields, and one which will most interest every merchant, is its adaptability to the faithful representation of all his goods on paper, photographically correct and in their proper colors.

As yet, comparatively few merchants and manufacturers comprehend the advantages of this new art for the purpose of illustrating and selling their goods. Some have been progressive enough to realize its possibilities, and are urging the photo-colorist to the reproduction of all classes of goods by this process. Some of these adaptations may be novel to the reader and may suggest the availability of this art as applied to the particular business in which he is most interested. As an example: how could a manufacturer of wall-papers better show the possibilities of his goods for decoration than by well-printed colored photographic reproductions of various rooms covered with papers of his manufacture?

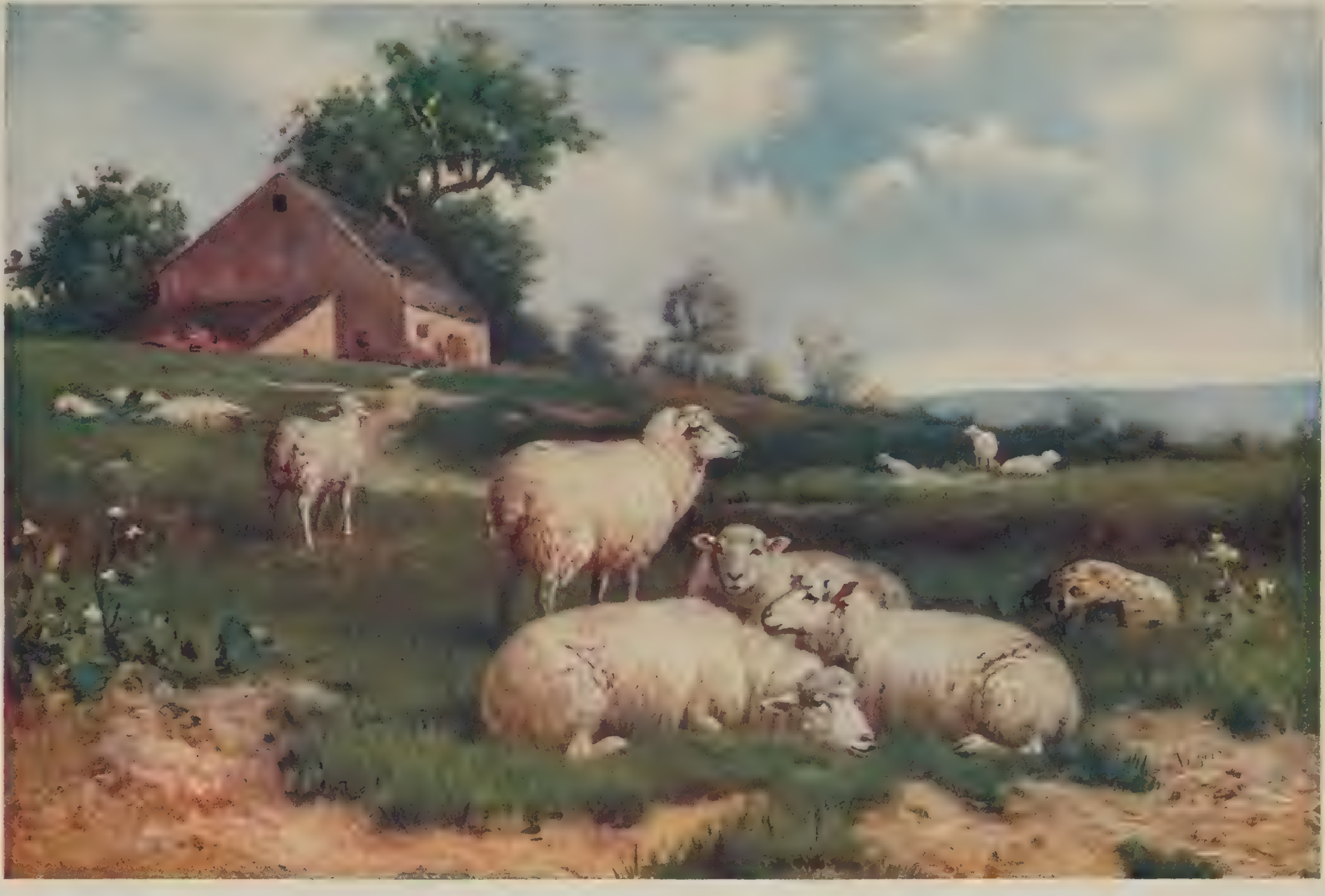
EVENING ON THE COAST.

From Oil Painting by Three-Color Photographic Process.

Could the manufacturer of artistic colored and iridescent glassware better tell his customer at a distance what wares he has to offer, than by sending a catalogue in which the goods are correctly shown, resplendent in all their glistening colors.

And the weaver of carpets and rugs — think of the possibilities for the display of these goods in color. At the present time this especial line of illustrating is well advanced, and faithful representations of all classes of floor coverings, curtains, draperies, and tapestries are in everyday use.

The manufacturer or dealer in clothing can not only show figures representing the cut, style, and tone, of the garments; but he can at the same time show colored prints of the goods,



ON THE FARM

From Oil Painting by Three-Color Photographic Process by Electro-Tint Engraving Co., 1227 Race Street, Philadelphia, Pa

BOOKS. Photographed direct.

giving the full size of the pattern, the color, weave, and texture of the cloths; all faithfully portrayed.

Sporting goods can be accurately shown, even to the exact reproduction of the most delicately colored flies used by the particular fisherman.

The book publisher can not only use the process for the purpose of illustrating the text of the volumes, but he can show on paper the exact style and colorings of the bindings.

The dry-goods dealer, the glove manufacturer, the ribbon weaver, the milliner, the corset maker, can each have his goods faithfully depicted in all the delicate shades and colorings which attract the eye of the customer.

The examples of Three-Color Photographic Process engraving used in illustration of this article were made by the Electro-Tint Engraving Company of Philadelphia. In justice to them it should be said that none of these illustrations were made for this article, but are "stock" subjects, selected from their catalogue.

The printing of these engravings was done at The Sparrell Print, Boston.

MOTH. Photographed direct.

A Device for Thoroughly Washing Photographic Prints

AUSTIN K. HANKS

THERE are numerous devices on the market for washing photographic plates and prints. Perhaps the greater number of amateurs possess some sort of a plate-washing box. These, as a rule, cannot be used for prints, so the amateur resorts to a couple of trays, or the lavatory. The latter, while it may do to a certain extent for small prints, from experience is by no means satisfactory. The ones which have the overflow at the top, the water which also always flows in at the top, do not carry off the heavier chemicals and sediment at the bottom. As is natural, but by no means what we should like, the prints also lie, one upon the other, at the bottom.

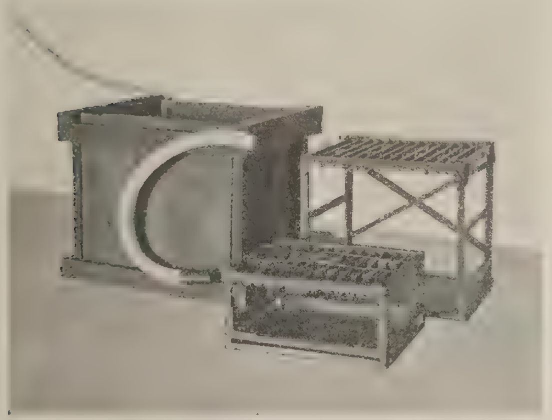


FIG. I. Showing tank and frames complete.

The other kind, which has a patented combination stopper and overflow, is better than the former in that when the water gets to a certain level it overflows at the bottom, but it is also unsatisfactory, as when the water is allowed to flow with sufficient force to keep the prints in a slight motion, the suction of the overflow very kindly draws a print over it. In a short time you hear water flowing, or rather overflowing, and upon investigation you are surprised to find considerable water on the floor. This has happened to me several times.

The method of washing by changing the prints, one after another, from tray to tray, filled and refilled with fresh water, is so slow that to do it properly would require the patience of Job.

The ball-shaped tanks which are sold for this purpose (I do not speak from personal experience, but from the experience of a friend who has one) invariably whirl the prints around and crack the emulsion.

In an article in the Christmas PHOTO ERA, there was this: "Discontent is the leaven which has raised the whole dull loaf of humanity to such betterment as it has attained." This I sincerely believe to be true, to a great extent, and very much so with me in this instance. Discontent led me to think upon what could be gotton up in this line that would be satisfactory.

After experimenting and trying several different ways I finally concluded to construct the device herewith described and illustrated, which has indeed given entire satisfaction, to the writer at least.

In passing, would say to my fellow amateurs who are at all handy with tools, although they may feel discouraged after reading this article, and somewhat dubious about constructing one, they will find that after doing so, the amount required will be well spent and that they have been well repaid for the few evenings' work given to it. Also that it will be a good and well-paying investment and not nearly so great a task as had been anticipated, but rather a pleasure. I for one thoroughly enjoy constructing various things for this and other purposes.

The device is not claimed to be perfect, nor a patent medicine which will cure everything and suit everybody's ideas. The great difficulty, alas, one of the great faults, with amateur work is improper washing. To the worker who is truly in earnest and enthusiastic nothing is too good, nor anything too much trouble to improve his photographic equipment. Thorough washing is essential for good work, and it is claimed for this device that it does wash prints, large or small, *thoroughly*.

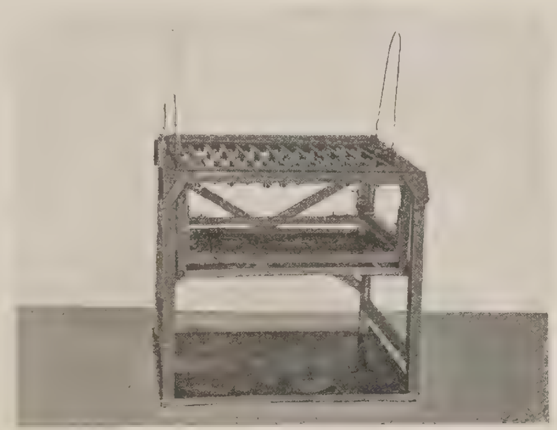


FIG. II. Showing small frame in place at top of large one.

The device is not at all intricate, but rather to the contrary. As shown in Fig. I the entire outfit consists of a zinc tank and two frames, the smaller one fitting or sliding into the larger one at the top and drawing out at the bottom. The whole (both frames) fitting inside the zinc tank when the prints are being washed and drawn out, set aside in any convenient place (without touching the prints) to dry as shown in Figures IV and V. This does away with the trouble of handling the wet prints, which ordinarily would be taken, one by one, out of the wash water and either hung up or placed between photo blotting-paper to dry.

As before stated, it is very simple both in construction and operation. As shown in Fig. I, a zinc tank, 16 in. long, 14 in. wide, and 15 in. high, holds the two frames, either separately or together. The zinc tank and two zinc pans at the bottom of the frames were made by a plumber; very likely these can be made better by such a person than by yourself.

Zinc is rather thin to stand the pressure of water, so it is necessary to construct a support around it. This is done with 1 x 2 in. pine lumber; having three strips across the bottom, two entirely around the outside, and three perpendicular at each end. The joints or ends of the various strips are held with 2-inch screws. The number of screws stated in the list is not more than one half needed. A pointer as to the cost of screws will doubtless be of service. About six dozen are needed, which, at the dozen rate of five cents, make a total of thirty. If purchased by the box you get the gross price of twenty-four cents; so that you can get a gross for less than you pay for six dozen.

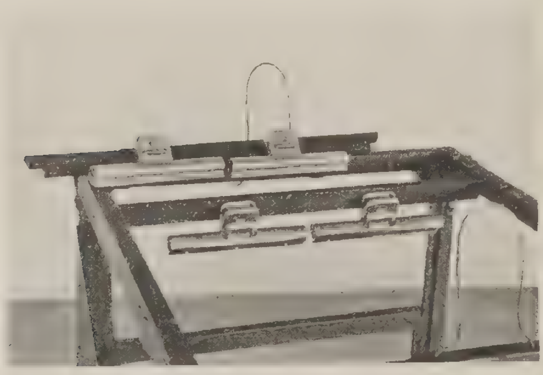


Fig. III. Showing individual supports.

The tank has a ½-in. inlet at the top, connected with three feet of ½-in. rubber tubing, the other end of which is placed on the end of a faucet when in use. At the bottom is a 1-inch outlet connected with two feet of 1-inch rubber tubing, this being fastened near the top of tank so that it will overflow when the water is ½ in. from the top. Thus the water flows in at the top and out through the bottom.

Both frames are made of ½-in. North Carolina pine flooring, sawed into ½-in. strips. This is a good wood for this purpose as it is quite hard, and, when painted, withstands the water very well. The large frame is 13 in. high, 12 in. wide, and 14 in. long, outside dimensions.

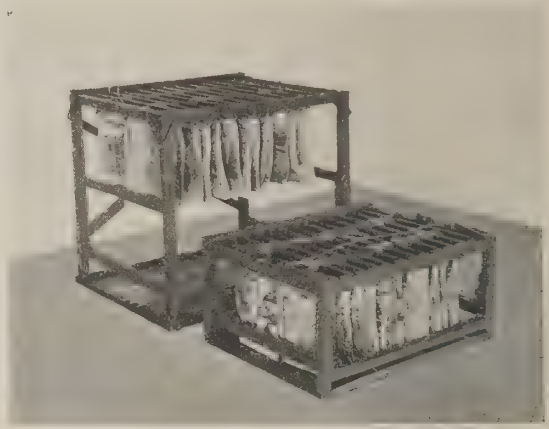


Fig. IV. Frames filled with 4 x 5 prints.

The reproductions illustrate the entire construction so well no diagrams are needed. It is supported, or strengthened, on the sides by two strips; also at the back by a cross. The four lower corners or feet are screwed to a zinc pan 12¼ x 14½ in. with a ½-in. edge turned up. The upper corners are made solid by six pieces of wood ¼ x ½ x 2 in. on the outside; also by heavy copper wire which is tightly drawn through holes burnt with red-hot nails. This is quite necessary, as you can neither bore holes nor drive screws in the ends without splitting the wood, and the fine nails which can only be used to hold the corners in place are not large enough to secure them properly.

The two top strips each have a series of twelve grooves ⅜ x ⅜ in. each; the back strip being covered with a strip ¼ x ½ x 14 in. These hold the ends of the individual supports for the prints. The individual supports are of the same wood ¼ x ½ x 11⅜ in. each; with a small piece sawed out of each end ½ in. deep and ¼ in. from the top. These ends fit in the little grooves as shown in Fig. III. Each support is furnished with two of Eastman's 3½-in. clips made for developing films. These hold or suspend the prints individually while being washed in the water, also as shown in Figs. IV and V when being dried.

The clips are wired to the individual supports with brass wire, running through three holes; one in the middle and one on either side of each clip.

The clips are nickel plated, so will not rust. They will probably seem expensive at two for twenty-five cents, but when the total cost is compared with manufactured articles it is indeed reasonable.

The small frame is for double capacity of 5 x 8 or smaller prints. It fits snug into the large one, sliding in at the top and out at the bottom. The outside dimensions are 10¾ x 12¾ in., and 6 in. high. The zinc pan is the same size, with an edge turned up ½ in., and is screwed to the legs in the same way as the large one. The four upper corners are wired together with heavy copper wire, running through holes which have been burned in. The two long upper strips each have a series of twelve holes ⅜ in. square; the back one being covered with a strip ¼ x ½ x 12¾ in. The twelve individual supports are the same as the large ones, except that they are only 9¾ in. long. They are also furnished with two clips each.

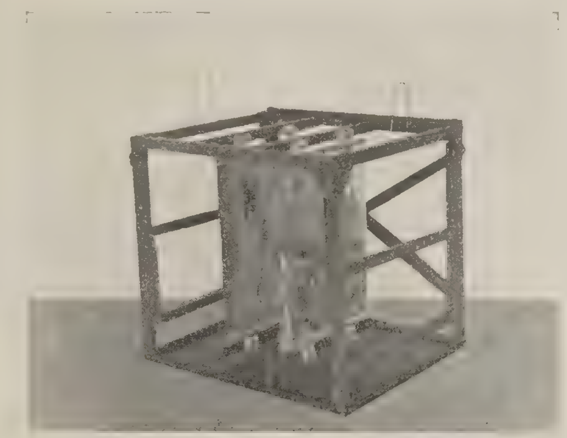


FIG. V. Large frame containing two 8 x 10 prints.

The four supporting strips near the base have a small galvanized iron brace in each corner. These are secured by four screw-eyes in each.

On each upper side strip there are two screw-eyes, through each of which run the ends of a piece of heavy copper wire, thus forming a handle which extends 7 in. In the middle of each strip is an oblong button, so that when the frame is in use (in the tank) the small frame slides down in the top of the large one (the large individual supports being all removed), and by turning the buttons crosswise the two tops are at the same level. When we wish to wash a number of prints smaller than 5 x 8, the small individual supports are at the top; the prints being placed, one by one, in the clips until filled. Then, by turning the two buttons parallel with the strips, the small frame is lowered by the two 7-in. wire handles. Then the process is repeated with the large individual supports which fit in the large frame itself.

The large frame also has a handle at each side, formed of the copper wire. These are used to lift the entire frame out of the water when through washing.

Both tank and frames (except the clips) are painted with a superior quality of black paint especially prepared for use on metal and to withstand the water.

The entire outfit is now complete. The necessary articles and cost are as follows:

32 ft. North Carolina pine flooring,	$0.30
48 Eastman's 3 1-2 in. film developing clips,	6.00
10 yds. brass wire,	.10
1-2 lb. heavy copper wire,	.05
3 doz. screw-eyes (1-2 in. heads),	.12
8 galvanized iron braces,	.09
2 buttons,	.02
2 zinc pans,	.40
Zinc tank,	1.10
3 ft. of 1-2 in. rubber tubing,	.30
2 ft. of 1 in. rubber tubing,	.50
32 ft. of 1 x 2 in. pine lumber,	.18
1 gross 2 in. screws,	.24
1 quart black metal water-proof paint,	.75
Total cost,	$10.15

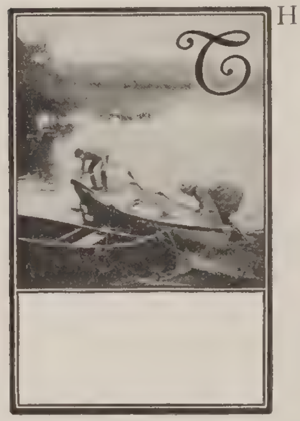
The great advantage of this tank is its adaptability to washing various sizes. You can wash twelve 8 x 10 prints or paper negatives at one time without any fear of their rolling up or being injured in any way, as when 6½ x 8½ up to 8 x 10 are washed the individual supports of the small frame are clipped to the bottom of the prints, thereby suspending each print and holding it perpendicular. In all cases each print is hung individually, so that nothing, except the water and the clips which take about ⅛ in., touches the face or back of the prints, and thorough washing is guaranteed.

A larger or smaller tank and frames can be made if wanted, but where 8 x 10 is the maximum size this outfit is about right. Its capacity is: twelve 6½ x 8½ up to 8 x 10; twenty-four 5 x 7 or 5 x 8, and forty-eight 4 x 5 or smaller, at one time.

When the prints are washed the frames are removed from the tank and set aside in any convenient place to dry (without touching a print), as shown in Figs. IV and V, except where they are Solio and are to be dried on a squeegee plate. The convenience of drying in this way is excellent, especially where one is using Velox, Platinotype, or other mat surface paper, as when the prints are in the open air they dry quickly and, being in a perpendicular position, their drying free from dust is insured.

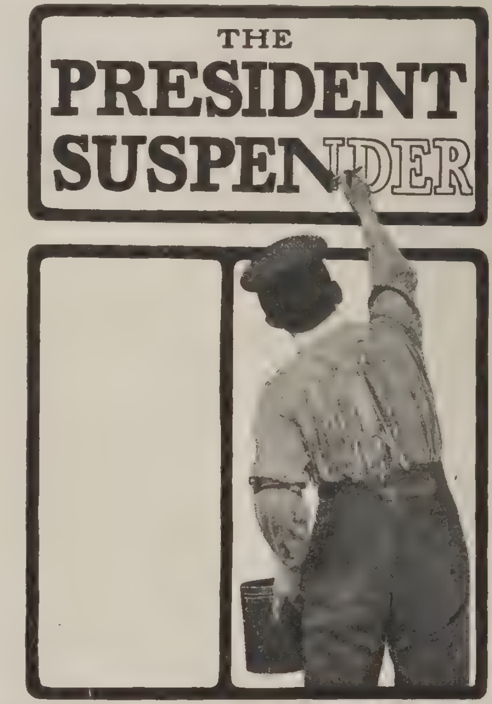
Photography in Advertising

(*Continued from Last Month.*)



THE advertisement has proved to be *attractive*, which is the first step. It must now go farther and *interest* the reader. And it will accomplish this result if it is pleasing, appropriate, and *true to life*. The last characteristic I believe to be very important, and it is here that the camera plays a star role. In no other way than by photography can real true-to-life pictures be satisfactorily produced at a moderate cost. It is the only practical method of securing such effects in advertising, and therefore it deserves favorable consideration by the advertiser. Now, having attracted and interested the reader by means of the design, it is reasonably safe to assert that in nine cases out of ten he will want to know something about the advertiser who published the picture and the goods that it illustrates. Accordingly, he proceeds to read the text, and if this has been prepared in the right way, with a sincere and convincing ring, he is pretty sure to be favorably impressed and to entertain a friendly feeling toward the advertiser. He may not need the goods at the moment, but when he does he will remember the design and the advertiser. Thus the space is made profitable.

"It is not necessary, however, for the text to do all the convincing if the design is what it ought to be, and here again photography becomes a valuable factor. For since this is really the only method by which nature or natural objects can be depicted in a manner that is absolutely true to life, it follows that a photograph is the most convincing kind of a picture that can be obtained, and that the prospective purchaser can be most readily influenced by means of a photograph. It shows him the article as it really is, enables him to determine whether or not it is what he wants, and is altogether far more effective than the picture (necessarily inaccurate) made by an artist, or the simple type display that can do nothing but describe. Hand a man or woman who desires to buy a certain article three advertisements of the article — one presenting it by means of a drawing, another by means of a photograph, and the third merely describing it in type. I'll risk the assertion that the first and last will be laid aside, while the photograph will be carefully studied. You see, there's something fascinating about a good photograph,



Suggestion for Suspender Advertisement. Photographed and designed especially for *Profitable Advertising* by Samuel L. Busha, and protected by the general copyright.

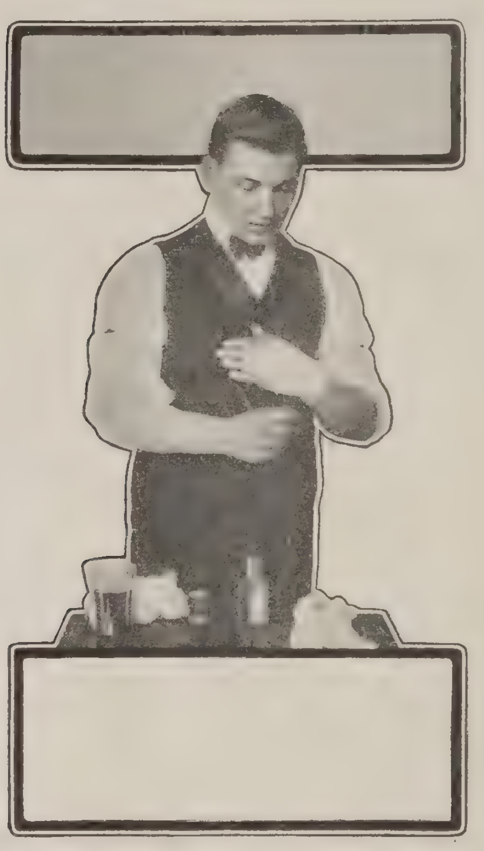
because the reader knows that it isn't a figment of the imagination, but a true delineation of people and things that actually exist — that it is *taken from life.* And if the photographer is clever, he can add to this fascination by making the picture tell a story in which the article advertised figures prominently.

Suggestion for Dentifrice Advertisement. Photographed and designed especially for *Profitable Advertising*, by Samuel L. Busha, and protected by the general copyright.

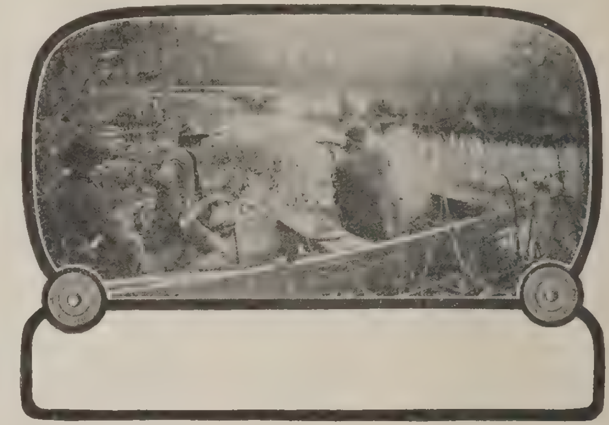
"I doubt if there are any, certainly there are very few, articles that cannot be attractively, interestingly, and profitably advertised by means of photographic designs. In the hands of a man who has good ideas on the subject, their advantages can be brought out strongly, and if, as I just said, the designs are made to tell a story, so much the better. True, in the untouched photograph there are details that may not show up well, owing to mechanical imperfections in the making of photographs; but a few skilful touches of an artist's pen or brush will remedy this difficulty, and the result will be most satisfactory from every standpoint.

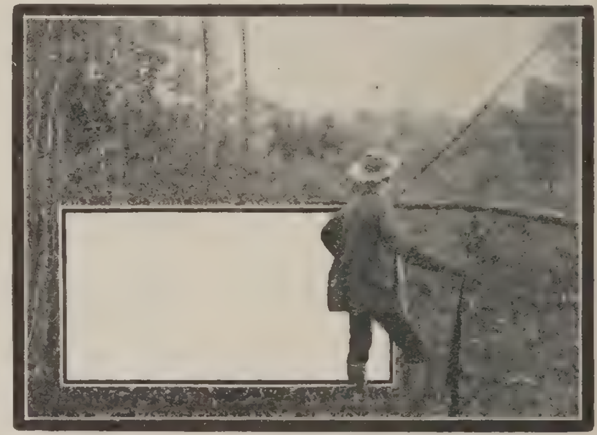
"To illustrate my idea of photographic designing, glance at this advertisement, which appeared in the November magazines. You will note that it exploits floor wax and is illustrated solely and exclusively with an ordinary and uninteresting picture of a can of the wax located in one corner. Now, how much more attractive, interesting, and convincing it would have been had a good photograph of a well-waxed floor in a neatly furnished home been used. The picture should show the reflections of the furniture in the polished surface and suggest the actual beauty of such a floor. Moreover, if a figure or two were introduced, the scene could be made still more attractive. Would not a person seeing such a photograph be more likely to conclude that the wax is good stuff than he would by basing his judgment solely on the can? The buyer of floor wax isn't interested in the can, anyway. He wants to know something about the contents of the can — how it works and what sort of effects it actually produces. If he is convinced that the article itself is all right, he won't worry about the appearance of the can it comes in. True, the text will tell him a great deal about the merits of the wax; but even poor wax can be described in very glowing terms. With the photograph before him, however, he has something tangible to hang his conclusions upon, and he is likely to be impressed and convinced. I might mention a dozen or more other cases to which the same criticisms apply, but it isn't necessary. Everybody who knows anything about advertising can see the point, and make their own applications. I will say, however, that if good photographic designs were more generally used by advertisers, there would not be so much space wasted.

"A field in which the camera is particularly valuable is in advertising all kinds of outdoor articles — firearms, bicycles, automobiles, golf and tennis goods, etc. These things are not necessities of life, and it is not enough to hold forth on the advantages of a certain brand. That is all right for those who already use such goods, and who may be influenced to pin their faith to one make. But we must remember that there are thousands of people who do not use them, and it behooves the advertiser to make strenuous efforts to reach the hearts of this class. In order to achieve this end, the first requisite is to awaken interest in the various sports for which the different articles are intended. Many people who never think of hunting, automobiling, or golfing can be converted if the right methods are used and their interest is effectively appealed to. This may be done by photographs — not mere photographs of automobiles, or guns, or golf sticks, but pictures that show attractive scenes in which these articles figure, and that suggest the fun they miss who do not participate in such enjoyments. Pictures of this sort will frequently arouse beholders to a high degree of enthusiasm, and the result will be decidedly profitable to the manufacturers. Who can look upon a series of first-class hunting scenes without experiencing a desire to become a hunter? Or who is likely to withstand a series of golf pictures in which young men and women are shown in attitudes and with expressions suggestive of the joy of living? Such pictures are the ones that exercise an almost irresistible influence over any person with a spark of sentiment.


Suggestion for Liniment Advertisement. Photographed and designed especially for *Profitable Advertising*, Samuel L. Busha, and protected by the general copyright.

"I want to emphasize the desirability of having advertising designs show the article *in use*. No matter what it may be, a photograph depicting it in actual use is most likely to attract, interest, and impress the reader. There is nothing so superlatively attractive or convincing about most articles as to make a simple reproduction of them the best kind of an advertisement; but put that article into the hands of the proper person and it becomes an object of interest. Of course, it is also necessary to see that the person is posed correctly, that his or her expression is what it ought to be, and that there is nothing to indicate that the scene was composed for the special purposes of the photograph. Everything must be natural and lifelike, with as much action as possible, and the result will be a photographic design that for real advertising value cannot be duplicated by any other method of picture-making. It will show the article as it appears when *in use*, and not as it appears when posed to have its picture taken."


Suggestion for Rifle Advertisement. Photographed and designed especially for *Profitable Advertising*, by Samuel L. Busha, and protected by the general copyright.


Suggestion for Rifle Advertisement. Photographed and designed especially for *Profitable Advertising*, by Samuel L. Busha, and protected by the general copyright.

Foreign Abstracts

Thiocarbamid Toning-bath Acid gold toning-baths, which keep far better than neutral or alkaline baths, but tone very poorly, give good results, according to Valenta, when one employs Helain's process. This consists in adding thiocarbamid to a gold chloride solution containing sodium chloride, and acidified with tartaric acid (or citric acid in the case of celloidin or aristo paper). The toning depends on the fact that gold chloride forms with thiocarbamid a colorless double salt $(CSN_2H_4)_2$.Au C1. This salt is acted upon by metallic silver, which replaces the gold. This bath is to be preferred to the sulpho cyanide bath, as it is not poisonous. Preparation: a solution of 1 gram thiocarbamid in 50 cc water is added to 25 cc of 1 per cent gold chloride solution, with continual shaking until the precioitate first formed is redissolved; then half a gram of citric or tartaric acid is added, the whole diluted to 1 liter, and 10 grams of sodium chloride are added. (Phot. Corresp., 1902: 650).

BACK TO THE OLD HOME. By H. W. Taylor.

Studies on Alums Not only ordinary alum, but also iron and chrome alum are known to possess the property that they can be treated with considerable quantities of alkali before a precipitate of metallic oxide is formed; chrome alum, besides, has the peculiarity of forming a completely insoluble compound with gelatin. Lumiere and Seyewetz have sought to ascertain, in the first place, what quantities of alkali are necessary to form a permanent oxide precipitate, and secondly, what are the most favorable conditions of operation to obtain the most complete insolubility of the gelatin. On the first point they found that with ordinary or iron alum enough alkali has to be added to separate one molecule of sulphuric acid from the alum, while with chrome alum, according to the temperature, one of two basic chromium sulphates is formed. As to the insolubility of the gelatin, they found that the best results were obtained when the alum solution is treated with alkali until a weak, but permanent precipitate is formed. (Bull. soc. chim. Paris, (3) 27: 1073).

Silver-Germ Theory of Development The view that light acting on the gelatino-bromide film produces direct germs of metallic silver, has been again brought forward in the course of recent discussion as to the nature of the latent image, and a silver sub-bromide of some indeterminate composition has been assumed as the germ substance which is first reduced to silver at the moment of beginning development, and then after the analogy of physical development determines the separation of more silver out of the supersaturated solution. A new method which appears to prove the correctness of the assumption that silver germs really do make chemical development easily possible is due to Luppo-Cramer. He finds that by bathing plates in neutral and ammoniacal silver solutions, a reduction of silver by the gelatin itself is accomplished, and thereby an actual contact of silver germs with the silver is obtained. Strips of dry plates were bathed in silver solutions of various concentrations, and after five minutes thoroughly washed. It then appeared, after three-minute development with metol-soda or iron oxalate that a developable action up to total opacity with the strongest solutions had been exercised upon the gelatin-bromide. This may be considered as a germ-action of the traces of reduced silver. The process of development of the latent image is thus no longer so purely hypothetical as it hitherto appeared. Solarization by germ-action was not observed either with neutral or ammoniacal silver solutions. The author does not believe that the ripening of the emulsion (increasing the sensibility by addition of or digestion with ammonia) is the beginning of reduction. (Phot. Corresp., 1902: 690).

The Riddle of Solarization

Hand in hand with the reversal of the latent image there goes a considerable chemical change, which is already visible before development, and consists of a strong coloring of the silver bromide. This is caused by the formation of Carey Lea's photobromide, which is completely insoluble in concentrated nitric acid, but on simple fixing leaves a weak visible image which is completely soluble in nitric acid, therefore silver. Luppo-Cramer's observation of the behavior of the solarized image with nitric acid, by the action of which the solarized image returns to the normal, while the photo-bromide is unchanged, appears to support the view that the provable chemical action under the influence of light not only is not to be regarded as the only cause of the appearance of the image, but that it may even be assumed that the chemical change is absolutely unimportant in the whole process. A new proof in this direction is given by the observation of the same author that by bathing thirty-six hours in 3 per cent hydrogen dioxide solution, or sixteen hours in 10 per cent ammonium persulphate solution, solarized dry plates are completely restored to their original condition, and may be used for new exposures, while the photo-bromide image remains unchanged. Solarized plates treated with persulphate act with reagents exactly as those not treated with persulphate. Bromine water bleaches the visible image; it is not affected by concentrated nitric acid; after fixing both bromine and nitric acid, remove the visible silver image. It seems to follow from this that the visible change of the silver bromide caused by long exposure has absolutely nothing to do with developability or its removal (solarization). It also follows, from the proven behavior of solarized films, that also in normal latent images the proven bromine separation may be unimportant for the initiation of developability. (Phot. Corresp., 1902: 694).

Plombotype

The Photographische Mitteilungen gives a short note on this method. Paper sized or coated with starch is floated for three minutes on a solution of 150 g of lead acetate in 450 g of water and 2½ cc of glacial acetic acid. When dry the paper is sensitized by being floated on a 3 per cent solution of potassium iodide. Exposure is under a negative, a greenish image being formed on the yellow ground. Fixation is in a saturated solution of ammonium chloride, the action being allowed to continue until the yellow tint of the ground disappears. A long washing in running water must follow. The finished print is bluish violet. (Amat. Photographer, 1903: 40.)

Sensitizing Plain Paper

In sensitizing ordinary paper, unless the image is to have a "sunken-in" appearance, the paper must be at least slightly sized. The following bath allows of salting and sizing at one operation:

Ammonium chloride (pure)	80 gr.
Dry sodium citrate	100 gr.
Sodium chloride	30 gr.
Nelson's No. 1 gelatin	20 gr.
Water	10 oz.

Soak the gelatin in the water until soft, dissolve by heat, and add the salts. Filter the solution and float the paper five minutes. When dry, sensitize by floating for two or three minutes on the following:

Silver nitrate	40 gr.
Water	1 oz.

Add ammonia (*drop by drop*), stirring after each addition, just enough to *almost* dissolve all the precipitate first formed. The stirring is essential to avoid the addition of too much ammonia. Printdeeply from negatives having plenty of contrast, and tone in the following:

Hot water	10 oz.
Gold chloride	1 gr.
Sodium acetate	30 gr.

The bath is ready for use when cold, but must not be made with cold water. The tones are purple. Fix as usual for prints. (Amat. Phot., 1903: 99).

The Crucible

PINACOL N., AS A NEW ALKALI Dr. Hanneke reports on a compound called Pinakolsalz N., which is somewhat vaguely described as a salt of an amido-acetic acid, whose exact composition is not known. It forms a clear and almost colorless solution, which has not the unpleasant action on the skin which characterizes the caustic alkalies. Various developers, made up with pinacol salt instead of an alkali, are given, of which the following pyro-developer will serve as an example: A stock solution is prepared by dissolving 25 g of pyro and 90 g of anhydrous sodium sulphite in a litre of water. For use, mix 50 cc of this stock solution with 10 cc of pinacol solution and 50 cc of water. Comparison of the above pyro-pinacol developer was made with a pyro-potash developer, prepared by mixing 50 cc of the above-mentioned stock solution with 50 cc of 10 per cent carbonate of potash solution. It is stated that the image appeared more rapidly in the pinacol developer than in the potash developer, and the development is said to have been completed sooner with pinacol than with potash. No data are given as to the gain with respect to time, and somewhat long but indefinite sentences rather suggest a superiority for the negatives developed by the new method. We are told that "the negatives by pinacol are in no way inferior in character to those by potash; they possess in the fullest measure the notable clearness, tone-gradation, and power of negatives developed by pyro. As regards the color of the negative film, it may be said that the pinacol plates show purer black and gray than plates developed by pyro-potash." (Ph. Mitt., 1903: 12; Am. Phot., 1903: 46).

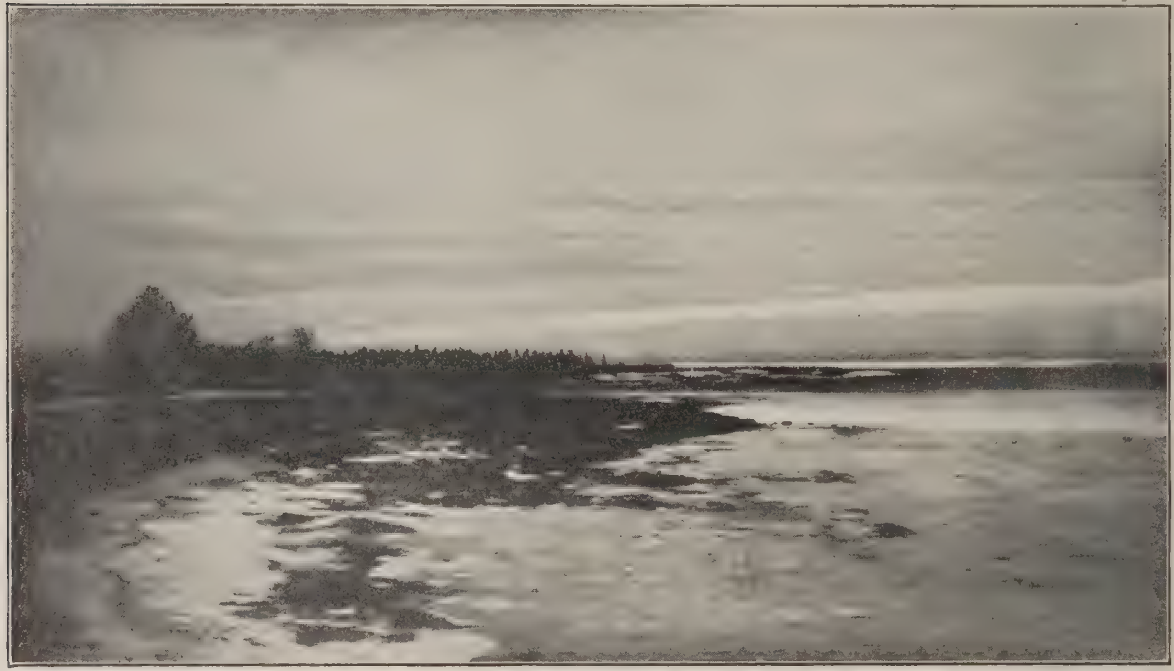
DEVELOPMENT OF ROLL FILM A French contemporary recommends the following method of handling films during development, fixing, and washing: A strip of film of convenient length, be it one, two, or more exposures, is cut off the roll, and fastened to the outer surface of a round glass bottle of suitable size, by means of two elastic bands at the top and bottom edges. The development is effected by immersion in a cylindrical jar of suitable size. If the bottle and the jar are suitably proportioned, so that the space between them is narrow, but a very small quantity of solution is required. In order to easily sink the bottle, it is to be filled with water. If a large enough bottle is used, a whole strip of film may be coiled spirally around it. Fixing and washing may be accomplished in the same manner, without touching the film with the fingers, and the bottle may be finally hung up for drying by a string around the neck, which has served for a handle during the previous operations. Suitable glass jars may be had from dealers in chemical apparatus.

PLAYERTYPE Mr. J. H. Player has recently communicated to the Royal Photographic Society some further details of his method of producing a negative from a print without the use of a camera. As may be remembered, this method consists in laying a sheet of sensitive paper face down on the image to be copied, after which the back of the paper is exposed to light. The image is apparently formed because more light is reflected from the whites of the print than from the blacks. One important advantage is that copies can be obtained from books, engravings, and similar objects in libraries, where the use of a camera would not be allowed. It might be expected that the images obtained would be very faint, but, by the use of a yellow screen and daylight, Mr. Player has secured some remarkable negatives. He makes his yellow screen by dissolving five grains of picric acid in sixteen ounces of water, and adding five drops of hydrochloric acid. This liquid is sealed between two plates of glass, in a layer about one sixteenth of an inch thick. Obviously, it would be very easy to dye a gelatin film with picric acid to the same intensity. With such a screen, gravura or velox paper gives a good negative with about thirty seconds' exposure, when developed with hydrochinon.

GOLD CHLORIDE The preparation of gold chloride from the metal is a very simple process, which requires only a slight knowledge of chemical manipulation, and gives the advantage of working always with a gold chloride of known purity and strength. The fifteen-grain bottles of commerce, as was proved by the analysis of a large number of samples last year, seldom contains more than sixty or seventy per cent of their reputed contents, although the weight is usually nearly correct. This is usually due to the fact that the salt is not the water-free gold chloride, as it should be, but a crystallized salt containing two molecules of water, which, in addition, is always bottled in a moist condition. Many of the samples, in addition, contained more or less sodium chloride. This is no detriment to the working qualities; fifteen years ago most photographers used the double chloride of gold and sodium, but one hardly cares to buy common salt at the price of gold chloride. So the best way is to prepare the chloride from pure gold. Buy from your dentist a pennyweight of scrap gold, or from a refiner, or a large photographic supply house, a pennyweight of ribbon gold, prepared for gold-beaters' use. It should cost a dollar. Both these forms are as pure as commercial gold can be made. Then buy from the druggist two ounces of hydrochloric acid and half an ounce of nitric acid. The mixture of these two acids in the proportion given is aqua regia, so called because it dissolves the noble metal gold, while neither acid will do so alone. Put your gold in a porcelain or glass evaporating dish, or a small beaker, and pour about two ounces of water on it. Add the hydrochloric acid, and warm to about the boiling point of water, after adding perhaps a quarter of your nitric acid. The warming may be done in a tin plate filled with sand, called a sand bath, or, better, by setting the dish over a round hole cut in the lid of a saucepan filled with boiling water. This makes a very good improvised water bath, or steam bath, as it is called chemically. When the acids begin to act on the gold, red fumes are given off. These have a very unpleasant odor, and are poisonous if inhaled in any considerable quantity. So this should be done in a well-ventilated place, and never in a living-room. After the action has stopped, add more of the nitric acid, and continue the addition at intervals until the gold is all dissolved. The nitric acid forms compounds with the hydrochloric acid which attack the gold, but, as these boil off quickly, it is necessary to add the nitric acid a little at a time, as directed. When the gold is all dissolved, continue the heating until the liquid has completely evaporated. During this process the residue of hydrochloric acid naturally goes off into the air, and, as it is not comfortable to breathe it, the ventilation should be good here also. An open fireplace with a good draught is an ideal place for such processes. By this process we get a neutral gold chloride which may be bottled immediately, and used as desired. In order to dissolve it, and also to keep the solution from depositing gold, a few drops of hydrochloric acid should be used to moisten it before dissolving in water. In practice this amount of gold chloride is best dissolved in thirty-two ounces of distilled water, after previous addition of ten or fifteen drops of hydrochloric acid. One ounce of the solution then contains about one grain of gold chloride. The acid solution can be neutralized by the addition of a little precipitated chalk, until some remains undissolved. This renders the solution neutral, and the insoluble excess has no effect on the toning bath.

In working with the hot acids, care should be taken not to spill any on the flesh or clothes. In case any gets on the flesh it should be immediately washed off with a large quantity of water. Turn the tap on full or plunge the hands in a pail full of water. With acids of the above-indicated strength no burn will result if washed off within a few seconds. The skin will turn yellow in a day or two, and peel off in a week, but no damage results. When nitric acid falls upon cloth it makes a red or yellow spot, which must be neutralized with ammonia, or a hole will result. The color, however, can never be restored, while with hydrochloric or sulphuric acids the color is restored by ammonia. In no case put ammonia on the flesh. The heat developed by the neutralization of the acid will inevitably cause a burn, even though the acid itself might not have time. The principal thing is to remove the acid as quickly as possible, by diluting with large quantities of water. If a burn has already resulted, it may be treated as any ordinary burn, with substances which prevent the access of air to the skin.

Open Criticism



SUNSET ON THE SOUND

We print herewith two criticisms on the picture published in the February issue. Out of the large number sent to us, we have selected these as the most satisfactory:

No. 1. — The worst feature of the unnamed print is that it is without objective point or motive. The eye, lighting upon it, wanders without being able to settle anywhere. We do not know whether it be a road, a pond, or a tree that the artist intended to picture. The lighting is bad, the lights being scattered, giving a blotchy effect. Exposure has been too short, leaving a fence, water, etc., white paper, and darker portions of the bushes perfectly black. Water should have been darker than sky from which it obtains its lights. A few clouds in sky would have served to effect a balance with the landscape. J. C. WILSON.

No. 2. — There are too many conflicting lines in the print. The horizon line is too near the center of the plate. The light and shade are not handled well, and the result is that the print is spotty. There is no central point of interest. The eye is caught by the rail fence and the ruts in the road and led up to the horizon to — nothing — no object to hold the interest. There are at least two good pictures at this place, but the photographer has missed them. L. E. MILLEA.

The prize award will go to No. 1.

Other criticisms received, and deserving of honorable mention, are from R. J. Calkin, A. M. Shurtleff, Herford Hope, H. T. Dougherty, Reuben S. Horman, Thos. J. Curren, G. W. Seaman, Henry S. Parsons, P. M. Riley, F. S. Foley.

We give another picture in this issue. Use a postal card, and limit yourself to one hundred words. The prize award is one year's subscription to the Photo Era.

The Round Robin Guild

Conducted by Elizabeth Flint Wade

(Any amateur photographer may belong by sending in his name and address)

ROUND ROBIN GUILD GROUPS

It is a very good thing, as Emerson says, " to exchange experiences, for thereby one learns something."

There is no class of workers that can learn more by exchanging experiences than the amateur photographer. One of our members realizes that fact, and is anxious to form " exchange groups," composed of five or six enthusiastic amateurs who would, in a " round robin way," send specimens of their work to each other, periodically. For instance, member No. 1 — the order being chosen alphabetically — would send a print to No. 2 for suggestion and criticism. This member would affix thereto his or her ideas of the composition, lighting, and the work in general, and forward it to the next member, and so on through the group until it reached the owner.

This would be a very helpful plan for those who formed these groups. Any member of the Guild who wishes to join such a group and will become the head member is requested to send name and address to the editor of the Round Robin Guild. Their names will then be published, and other members invited to join. The number in each group will not exceed seven. Those who wish to join one of these groups in the vicinity of Boston are requested to send name and address to Mr. Henry C. Robinson, Assistant Superintendent of the Boston & Maine Railroad, Southern Division, Boston, Mass.

We should very much like to see a number of these Round Robin groups formed, for amateurs will derive great help and benefit from this kind of friendly criticism.

Another suggestion made by one of our members, Dr. Vida A. Lanham, is that photographs of interesting things be sent to the hospitals. This same idea was suggested and carried into practice three or four years ago, through the Camera Club of the Harper's Round Table. These prints were made for the children's ward, and the subjects were of pet animals. On the back of each print was written the name of the animal, what things it could do in the way of tricks, etc., and a short history of its life. The pictures were mostly of cats and dogs, — pictures which are a great delight to children, — but there was a set of pictures, showing all the animals on a farm, which was especially interesting.

Children can look at pictures if they cannot read, and if any of our members feel like giving something very nice indeed to the children's ward in a hospital let him or her make a set of pictures, the subjects of which will interest children, write a little description on the back, and send them, say for Easter gifts. Be sure it will be a veritable cup of cold water, and the giver shall not lose the reward.

One of the best ways to enjoy anything in this world is to pass the pleasure along.

PHOTO-CERAMICS

A number of the members of our Guild have asked for information on the process of transferring photographs to china. The directions are rather too long to be given in full in this department, and such of our members who wish to study the subject in all its different phases are referred to the handbooks on the subject. The formula given here is one of the simplest.

Make up a solution of two ounces of gum arabic dissolved in seven ounces of a saturated solution of bichromate of potash. Make up another solution of one half ounce of gelatin, two ounces of a saturated solution of bichromate of potash, and eight ounces of water. The first solution is dissolved without heat, but the second is dissolved by heating in a water bath. To sensitize the china or porcelain take five and one half ounces of the gum arabic solution, two and one half ounces of the gelatin solution, and two and one half ounces of water. To each ounce of this solution add eighty drops of honey syrup, made by mixing equal quantities of honey and water. Heat altogether to about ninety degrees F., stir well with a glass rod, and filter the solution while still warm. Warm the porcelain slightly and pour this sensitive mixture over it in the place where the picture is to appear; drain well and pour over again. The coating must be very even, and warming the china or porcelain and using the bath while slightly warm will secure this result. Dry in a room free from dust and light. The sensitizing process must be done by gas or lamplight.

The picture to be made on the porcelain must be a positive, and if the surface be flat enough — which is the case with plates or plaques — make a transparency on the lantern slide or transparency plates. If too rounding a surface, then a positive of paper or film is used.

Adjust your positive over the sensitive surface, holding it in place with clips, and protecting by non-actinic paper those parts which are not to be exposed to the sun. Expose to bright sunlight for at least ten minutes. There is no way of gauging the exposure, unless one makes trial plates, and this is always a wise thing to do. Spoiled plates or pieces of porcelain may be coated with the solution and trial prints made on them, then the piece to be ornamented can be printed and developed with accuracy.

When the exposure has been made, take any of the enamel colors,— brown will be found the most desirable, especially for portrait work, — take a wad of cotton, breathe on it, or hold it over steam just long enough to moisten it, dip it in the color, and dust it carefully on the image. Do not rub the image, but dab the powder on gently. Gradually the color will begin to adhere to the parts of the picture which were not exposed to the sun. The cotton is again moistened by the breath or by steam, more powder applied, and the dusting-in process continued until the picture is of sufficient strength or density. The next step is the removal of the unchanged bichromate of potash. Make a solution of nitric acid in the proportion of forty drops of nitric acid to an ounce of water. Take alcohol, and for every ounce add fifty drops of this dilute acid. Enough must be mixed to immerse the article in it, or the acid can be poured on and off the plate. When the brown color of the unused bichromate of potash has disappeared, remove from the acid bath and place in a bath of pure alcohol. Let it remain for a few minutes, remove and place in a second bath of alcohol, for, to have the process successful, every trace of the acid and water must be removed. The plate or plaque is now ready for firing, the burning-in of the picture being done in the same way as for china firing.

There are several processes for transferring photographs to china, but the dusting-in process is the simplest, and is usually successful. One cannot expect to make a perfect picture with the first trial, and it is therefore wiser to experiment on small pieces of porcelain until one has learned to coat the surface evenly and to determine just how far the development should be carried.

How to catch clouds was for a long time a problem which the camera artist found it hard to solve. His skies were patches of blank paper, and for any suggestion of a sky one might search as carefully, and with not so good success, as in the puzzle pictures, where one is instructed to find a dog or a man.

Now, however, with the improved methods of coating sensitive plates and the exposure and developing, and most of all for the little device called the ray filter, one can always be assured of securing the pictures of clouds if there be any in the sky. But it sometimes happens that the ray filter is not at hand, or the exposure must be so quick that it cannot be used. The clouds, in consequence, are lost in the development, being much overdeveloped in order to bring out the detail in the landscape. In such a case there is a makeshift which will enable one to show clouds in the sky. This is the device of double printing. The landscape is first printed to the required density, the print taken from the frame, the printed part carefully masked, and a cloud negative substituted for the landscape negative.

The mask is made by taking a proof from the negative, cutting it carefully along the horizon line, and laying it in the sun to blacken. When the landscape is printed deep enough this mask is adjusted over the printed part, taking care that the mask registers exactly with the print, or there will be a line, either white or dark, according to the way the mask is adjusted, all along the horizon.

Where the clouds are not very much overexposed, but are too dense to make a satisfactory print, one can attach a piece of tin to the printing-frame curved away from the frame. This will shadow the landscape part and let the clouds print in deep enough to show. This way of equalizing the printing is only practicable where the horizon line is almost straight.

Most amateurs make a practice of securing good cloud negatives to use with white skies. In developing such negatives they should be brought out very slowly, for if the development is forced or hurried the delicate half-tones, which are the charm of a cloud picture, are very apt to be lost. The best time of year for making cloud negatives is either in the spring or fall, when the weather is variable and cloudy days prevail.

Now, in using cloud negatives with landscape negatives one must use something else, and that something else is brains. If one will use his eyes he will notice that there are all sorts and conditions of clouds; that the clouds of the early morning are not the clouds of midday; and that clouds also have their times and seasons. An April sky in a July landscape would be an anachronism so glaring that the veriest tyro would perceive it. The safe and really artistic way is to make two negatives, one of the landscape and one of the sky, and when printing use the two negatives for the double printing. A print which won much praise when exhibited a short time ago, was a landscape the sky of which was one of the most beautiful examples of cloud photography one would care to see. There was, however, in the foreground a pool of still water, the glaring white surface of which reflected none of the beautiful clouds which floated above it. The artist had printed in his sky most cleverly, but had overlooked the fact that if such cloud conditions had prevailed as were shown in the sky they would certainly have had their counterpart in the pool.

Study your skies; study your landscapes; then choose your skies to harmonize with your landscapes.

While on the subject of clouds, it may be well to speak of so-called "moonlight effects," a number of our correspondents having sought information on this subject. Moonlight effects are obtained by choosing a sunrise or sunset sky which is full of clouds, pointing the camera directly at the sun, and making an exposure just as clouds pass across its face. The best results are obtained with non-halation or orthochromatic plates.

The effects obtained in the early morning are far more artistic than a picture taken at or near sunset. In the morning at "sun-up" the mists and fogs rising from the ground produce fine atmospheric effects, a thing which the camera artist strives for continually and attains so seldom. The reason may be summed up in a few words.

Sometimes these so-called moonlight pictures do not suggest moonlight at all, but in some cases they are quite realistic moonlights, the sun masquerading as the moon and, like the moon, "turning the clouds, as they pass, to light."

BROKEN NEGATIVES

So many of our members availed themselves of the offer to send the directions for transferring the film from a broken negative to a whole glass that it seems wise to print the details of the process for the benefit of those who were too modest to ask for themselves.

If the glass be broken and the film remains intact the film may be transferred to another glass and the negative be as "good as new."

Take a glass plate the same size as the negative, or a size larger, and put a bit of beeswax at each corner and a little along the glass where the crack will come in the broken negative. Apply a gentle heat to the glass until the wax is melted; then place the broken negative on it, and press the two carefully together. This precaution prevents the tearing of the film and makes a support for the broken negative. Next mix together two ounces of water, six ounces of alcohol, and twenty-four millimeters of hydrofluoric acid. This is placed in a rubber tray. In another tray put a solution made of two ounces of water and six ounces of alcohol, and place a clean glass at the bottom of this tray. Immerse the broken negative (previously attached to the whole glass) in the tray containing the acid solution and rock the tray gently. In a few minutes the film will begin to loosen at the edges. With the ends of the fingers — protected with rubber finger-tips — push the film gently from the glass, keeping it beneath the liquid while stripping it from the glass. When it is loose from its original support take a clean glass, lift the film by one corner, and slide the glass under it, handling it very carefully. As soon as the film is on the glass, transfer it to the tray containing the alcohol and water, sliding it gently into the liquid. Straighten it out under the solution; lift the glass from the tray, and, with a wad of surgeon's cotton or a camel's-hair brush, press the film to the glass, forcing out all the air-bubbles between film and glass. When it is in place and in perfect optical contact, drain and set the plate away to dry where it will be free from dust.

The process reads rather complicated, but in practice it is a simple matter to transfer the film from one glass to another.

ANSWERS TO CORRESPONDENTS

John R. Smith. — The prints which you have sent for criticism are for the most part excellent both in finish and selection of subject, point of view, etc. The only fault — though fault is hardly the word to use in this connection — is the absence of clouds in the sky. The picture, "Landing the Fish," is fine, and has a sketchy effect which is very attractive. The sailboat is just near enough and just far enough away to lend the needed perspective. The composition of this picture is very good. If you have a negative taken at the same time of day, showing a few light clouds in the sky, they could be printed in with good effect. See this number for the printing in of clouds. They should be printed in very lightly so as to harmonize with the tone of the picture. Your views of the quaint streets and houses of Provincetown make one desire to pay a visit to this interesting town.

Mrs. W. A. Blumenthal. — The present number of the Guild contains directions for making photographs on china and porcelain. This is the easiest method of making prints on china, and if you follow the directions carefully, first making experimental prints as suggested, there is no doubt of your success.

John W. Faull. — If you wish a book on Photo ceramics we shall be glad to supply you with a copy at publishers' rates. In this number you will find directions for the dusting-in process, which is the simplest of all methods for making photographs on china.

P. Ruttkay. — We shall be very glad indeed to have you take charge of the historical guild work in your locality. Our circulars are almost ready for distribution, and will be sent you as soon as ready for mailing. In them you will find full suggestions on the methods proposed to carry on this important work.

P. M. Riley. — The solution for flattening bromide prints is equally serviceable to use with velox prints. The velox prints will stay flat if they are first dried and then drawn carefully over the edge of a drawer. This straightens them, and they will not curl again.

A Ray focusing camera, plate 4 x 5, fitted with a R. R. lens, Iris diaphragm and Unicorn shutter, having 3 double plate holders, tripod focusing cloth, and ray screen. Total cash when new about $20. Is as good as new, having been used but a few times. Will be exchanged for a No. 4 Panorama Kodak equally good. Address, John R. Smith, Provincetown, Mass. Box 223.

Vera Burns. — To make photographs appear on apparently blank paper, make a print on albumen paper and fix and wash it without toning; then immerse in a saturated solution of bichloride of mercury until the image has disappeared; wash and dry. To make the image visible, place the picture in contact with a sheet of moistened blotting-paper, which has been previously soaked in a saturated solution of hyposulphite of soda. In a few minutes the picture will appear in as strong lines as before the immersion in the mercury. The picture will fade again after a time, but may be "restored" at any time by means of the hyposulphite of soda sheet. To make the trick mysterious, place the moistened sheet of paper in a book; show the plain piece of paper; place it in the book next to the blotting paper; let it remain for a few minutes; then take it out and exhibit the picture.

G. M. B. — An excellent way to label bottles for the dark room is to paint on them directly with white enamel paint. Make the letters large and they are easily distinguished.

Bertha D. — No; a vignetter to be used in the camera would not be a good investment. If you will study the pictures made by this process you will see how very inartistic they appear If you wish to vignette a picture use either a vignetting glass or a plate box with an opening torn in it the size which you wish the vignette. Unless it is desirable to block out some portion of a picture the print is more artistic if cut either square or oblong, and neither vignettes or cut-outs of any shape employed. By all means avoid the masks cut in bizarre shapes with angles and curves. They spoil the effect of the finest picture.

Notes and News

BOSTON, MASS. Officers of the Lens and Brush Club have been elected as follows: President, W. E. Marshall, of Arlington; vice-president, E. G. Merrill, of Salem; secretary-treasurer, W. John Searle, of Boston; advisory committee, M. B. Parkinson, A. A. Glines, and H. A. Latimer, all of Boston.

An exhibition of photographic prints, mostly of architectural subjects, by Mr. Frederick H. Evans, of London was held at Mr. F. Holland Day's studio, Harcourt Building, on Fridays and Saturdays, Feb. 20 to March 1.

OTTAWA, ILL. The Camera Club held a very interesting meeting, Feb. 27, at the office of Horace Hull. The program for the evening was a very interesting and instructive talk by W. W. Nash, on the "Tools of the Craft — the Camera and Lens." Mr. Nash gave a very fine talk, illustrating his remarks with diagrams, etc. This is the first of the series of educational programs of the club and will be followed by others along the same line.

PITTSFIELD MASS The Ramblers' Camera Club of this city has been organized, with Frank North as president.

GRAND RAPIDS, MICH. The fifth annual exhibition of the Grand Rapids Camera Club will be held at the Pantlind Hotel, on March 18, 19, and 20. Twelve classes of studies are on the list of entries for prizes, and the prospects are for the most successful exhibition ever held under the auspices of the club.

During February, the members of the club had on exhibition at the club-rooms, Auditorium Building, a collection of pictures from the studios of Elizabeth Flint Wade and Rose Clark, of Buffalo, N. Y.

TAUNTON, MASS. The Camera Club has elected officers for the year 1903 as follows: President, F. C. Whitehead; vice-president, Charles A. Brown; secretary and treasurer, William A. Bellamy; trustee, F. A. Paull; auditor, William Whitehead.

TOLEDO, OHIO The executive board of the Ohio and Michigan Photographers' Association met at the St. Charles Hotel, Jan. 29, to consider arrangements for next summer's convention to be held at Saginaw, July 22 to 24.

There were present the incoming officers who make up the board, as follows: President, A. L. Bowersox, of Dayton; vice-president for Ohio, Frank R. Bill, of Cleveland; vice-president for Michigan, C. A. Beckman, of Saginaw; secretary, W. F. Wolf, of Cleveland; treasurer, W. L. Smith, of St. Marys; and the retiring president, C. S. Bateham, of Norwalk.

PROVIDENCE, R. I. The first exhibition of the work of the women members of the Providence Camera Club was held in February, at the rooms of the club, and the exhibit of high-class photographs well repaid all who saw it. The exhibit compared well with any that have gone before. A majority of the photographs were portraits and figure studies, but there were enough marines and landscapes to give a pleasing variety.

The list of exhibitors included Miss F. E. Henley, Misses A. H. and C. T. Child, Miss Ruth L. Anthony, Miss Sarah J. Eddy, Miss Mary G. Huntsman, Mrs. Bessie Brown Polleys, and Mrs. Helen West Cook.

CAMBRIDGE, MASS. The Harvard Camera Club held an exhibition and a lecture on "Color Photography," given by Prof. Louis Derr, of the Massachusetts Institute of Technology, in the lecture room of Pierce Hall, Wednesday, Feb. 18. The annual exhibit of the club was opened that evening in the museum room of Robinson Hall.

GLOUCESTER, MASS. The regular meeting of the Cape Ann Camera Club at the rooms, on Feb. 2, was a well-attended and enjoyable event. President Docherty presided, and considerable progress was made toward the photographic exhibit which will be held in March.

Following the business meeting, the committee on refreshments, Dr. Logan and R. W. Phelps, officiated at the chafing dishes and served delicious lobster Newburg, receiving the commendation of all on their efforts as chefs.

Following the supper, came a session of sociability, presided over by Ernest L. Blatchford.

JERSEY CITY, N. J. The first regular meeting of the recently organized Camera Club of the First Congregational Church was held recently in the lecture-room of the church, Bergen and Boyd avenues. Membership is not restricted to members of the church, and all who are interested in amateur photography are invited to join the club. Mr. Lester Dygert, a well-known amateur photographer, is the president of the club, and he will also be club instructor. A room has been partitioned off in the basement of the church, which will be made into a dark room, and everything necessary for the developing of plates and films will be provided. Members will have access to the rooms every day and evening, Sundays excepted. The room will have two doors, so that members can enter without disturbing the work of others.

Several trips are being planned by the club, and prize exhibitions will be a feature of the organization.

BEVERLY, MASS. A photography section of the Centennial Club was organized at the Dane Street Chapel, Tuesday evening, Feb. 17, when the classes in current fiction and silk embroidery also met.

MONTREAL, CANADA The parlors of the Montreal Camera Club were well filled Tuesday night, Feb. 24, when a lecture was given by Mr. C. F. Stanley on X-ray photography. The entire apparatus and its workings were explained in a clear manner by the lecturer. He demonstrated the powers of the cathode ray in photography, and several of those present had pictures taken of their hands and feet. Cardboard was experimented with, holes being cut clearly through cards by the current wherever it touched it.

PENROSE'S PICTORIAL ANNUAL, 1902-3 We have received Penrose's Pictorial Annual, 1902-3; a most interesting volume in which all modern methods of producing illustrations by photo mechanical arts are most ably discussed by the leading workers of Europe and the United States. The work contains nearly fifty technical papers, describing the processes required for producing printing-plates by photographic means; and the nearly two hundred illustrations in black and colors are as varied as the methods described, which cover half-tone, trichromatic, collotype gelatin, copper, and steel engraving processes.

The technique of the book is the highest, and is a credit to its publishers, A. W. Penrose & Co., 109 Farringdon road, London, E. C. The work can be obtained of Tennant & Ward, sole American agents, 287 Fourth avenue, New York. 136 pp. $1.50.

PHILADELPHIA, PENN. The Philadelphia Photographic Society, the oldest photographic society in the United States, has just purchased the property 1722 Arch street, of that city, for a sum approximating $18,000.

It is proposed to remodel a part of the building and make an ideal club-house, at a total cost of about $27,000, for all equipments.

The large parlor on the first floor of the newly acquired building will be turned into a library and reading-room. The floor overhead will be converted into an assembly room, 21 feet wide by 38 feet deep, with three windows in the front and one in the rear.

A new skylight will be put in, and facilities necessary for the equipment of a photograph gallery will be installed. It is estimated that the increased cost of maintenance will be about $500 annually. To meet this there has been an increase of dues.

MINNEAPOLIS, MINN. The first photographic salon held in the city was opened Feb. 6 to 16, at the gallery of the public library, under the auspices of the Minneapolis Society of Fine Arts and the Minneapolis Camera Club. Two hundred and seventy-one pictures were shown, including those of the best artists from New York to San Francisco, eighty-eight exhibitors being represented.

The place of honor was given to the invitation exhibition of eighteen prints from the famous Photo Secession of New York. Of these Alfred Stieglitz and Frank Eugene have some fine portraits, and Gertrude Kasebier has some poetical subjects beautifully treated.

Among the interesting groups are several from Chicago, including the strong, dark photographs of Solon L. Sates, and work by Edward L. Bourke, E. M. Blaine, and Robert E. Weeks. Curtis Bell had a very interesting picture of two cats stretching up to reach something on a cupboard shelf. Interesting character studies of women are shown by George Donehower, and there is a fine foreign flavor to W. Otto Emerson's prints of "Flax-Spinner of France," and "In the Land of Corot."

PHOTO ERA

The American Journal of Photography

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March What wonderful transformations a few days, at this season of the year, make in the appearance of nature. Wild and blustering March, with its keen north winds and light falls of snow, slips hurriedly by. The fields appear very barren and unattractive with the dead leaves mouldering on the dry grass and the earth bound up tightly with chains of frost. The south wind stirs, a dripping shower refreshes, and nature appears resurrected, decked out in robes of richest green.

> " We hush to hear the sweet
> Far fall of summer's feet,
> And soon,
> In the calm blaze of noon,
> By lowly window sills,
> Will laugh the daffodils."

Catatype We call attention to this new photographic process which is referred to at length elsewhere in this issue. While the results, thus far, are by no means satisfactory, it is reasonably sure, in the very near future, to simplify many processes now in use.

The method is described as follows: Over the finished negative is poured a solution of hydrosuperoxide. This leaves, after evaporation, a uniform layer of peroxide of hydrogen. Soon the silver of the plate works upon this peroxide and produces a catalytic dissolution wherever there is silver, while, in the places free from silver the peroxide remains. By this means an invisible picture of hydrosuperoxide is produced upon the plate. This picture can be printed from the plate directly upon common paper, to which the image is transferred in a few minutes.

There are various ways of developing the picture. For example, treatment with a solution of green copperas produces a weak yellow picture of iron, which with ferricyanide of potassium is made blue, with gallic acid is made violet, and with pyrokateolin is made black.

As many of the colors named above are durable — the picture with gallic acid consists of common ink, which can last for centuries — the problem of making the common silver photograph lasting appears to be solved.

Moreover, it is no longer necessary to photograph upon a transparent surface like glass or celluloid, as light is not needed in the printing process. The printing is all done direct from the plate.

At last the photographer finds himself relieved of a number of tedious intermediate processes between the development of the plate and the finished picture.

Photography in Colors The three-colored insert published in this issue directs attention anew to the possibility of reproducing photographs in natural colors. The Photo Era will give special attention to this kind of work in the future. We hope to be able to favor our readers shortly with a remarkable three-color print, by Dr. Miethe, of Germany, who has demonstrated how a sensitizer can be used in the manufacture of an orthochromatic plate, and, then, in conjunction with color screens, can be made to produce a photograph in natural colors.

" We gather from Dr. Miethe's description of this photograph," says the British *Journal*, " that he and Dr. Traube have been occupied with a systematic investigation of color sensitizers. They find that ethyl-red is a sensitizer for the entire visible spectrum, even including the well-known gap which occurs in the green-blue region. They claim it to be unique in this respect. The plates used for the picture named above were dipped in a solution of this dye, and Dr. Miethe estimates their sensitiveness as eight to ten times greater than that of the Perchromo plates which he formerly used. With the filters of his make, the exposure is about the same for red as for blue, whilst for green it is twice as quick. Using a lens stopped down to F. 12.5 on a bright September day, without sun, at half past ten in the morning, the exposures were one and one half, three fourths, and one and three fourths seconds for blue, green, and red, respectively. We would again impress upon photographers the great importance of closely watching and studying the improvements which are slowly but surely being made in the processes of color-photography. The art of the professional photographer cannot remain a monochromatic one. At the present moment portraiture by the three-color process is within his reach, and, as in the days of the wet-plate, those who first succeed in mastering the technique will reap the richest harvest. Many photographers lament the facility with which the dry-plate process may be acquired, and turn their minds regretfully to the past, when manipulatory skill protected them from keen competition. If there be a genuine desire for work of a higher order, the field of color-photography lies temptingly before them."

Photography and Religion We have long believed and still hold to the opinion that next to religion, Picture-making by Photography is one of the most powerful factors to help make people good. Assuredly it is one of the strongest influences to throw around young people to shield them from evil. And both old and young are benefited and strengthened by cultivating a love for nature and for the beautiful, such as the right use of the camera will surely engender.

We are not, therefore, surprised to learn, as noted elsewhere in our Notes and News page, that certain churches in Massachusetts and New Jersey have already organized camera clubs among their members and have set apart rooms in the church building to be used as a dark room and for lockers. For some years past the stereopticon has been recognized in many of our leading churches as a factor in church work, especially in teaching Bible history.

Photographs from life and lantern-slide pictures have been used to make clear to congregations and Sunday-schools without number, many passages from the Old and New Testaments.

Finally, at a recent Sunday-night lecture in Brooklyn, N. Y., Institute, on "The Power, Wisdom, and Goodness of God, as manifested in his works," we read of how the lecturer, Garrett P. Serviss, told of the great celestial discoveries made recently by photography.

"The founder did not ask us to discuss God," he continued, "but simply how He has manifested himself." He believed that all who studied astronomy must have a consciousness of the great All-Power that could direct such an array of worlds and keep them non-interfering.

Mr. Serviss gave a description of the spectrum and of its principles, which he made so simple that any one could understand, being aided in his explanation by the photographed results of experiments showing the formation of the ribbon of colors by the white light focused through the prism, and then of the lines on that ribbon which are made by the various vapors. In later pictured explanation, when these lines appeared, he called attention to them and said: "You see the signature of a vapor cannot be forged. The spectroscope makes us like gods upon the earth, for by its aid we read this writing in the heavens. It gives us a wonderful grasp upon the system of motion."

By its aid, about ten years ago, he said, the discovery of distant suns in space was made, and when speaking of the double stars and contrasts of colors in stars he said these contrasts proved that young stars are sometimes linked to old ones, "for the colors furnish a clue to the age of a star as truly as a jockey reads the age of a horse by its teeth." Red means decrepitude, and the blue, yellow, and green stars are young.

Such a lecture, with its imposing array of truths and pictures, is as powerful as any sermon. And we submit that, in the light of all these facts above enumerated, photography has now become the handmaid of religion.

Ourselves It is not the part of wisdom to be eternally boasting, even in advertising. We believe it is always better to slightly understate rather than to exaggerate the quality of goods for sale. A plain, honest statement always carries conviction. We therefore merely rise to state that the new Photo Era is a success. We cannot print copies enough to supply the demand. Orders for the April issue should reach us at once in order to be filled promptly. We again call attention to the proposed increase of price. On and after April 1, the subscription will be advanced to $2.50 a year, while the retail price will be twenty-five cents a copy. Meanwhile, subscriptions sent in during March will be accepted at the old rate, $1.50 a year. The editor of the *Photo Miniature* is authority for the statement that the Photo Era is a bargain at the price.

Prize Awards The grand prize award for the best set of photographs submitted in our First Photographic Contest has been made to Wm. Whitehead, of Taunton, Mass., who offered six pictures in his collection. Honorable mention in this class goes to Geo. H. Seeley, of Stockbridge, Mass., and also to Miss Cora Stanwood Cobb, of Newton, Mass.

The first public exhibition will be held at the rooms of the Photo Era, 170 Summer street, during the week beginning March 23. The public are cordially invited.

A WATER-CARRIER, CUBA. Copyright, 1901, by H. A. LATIMER.

Frontispiece for April, 1903

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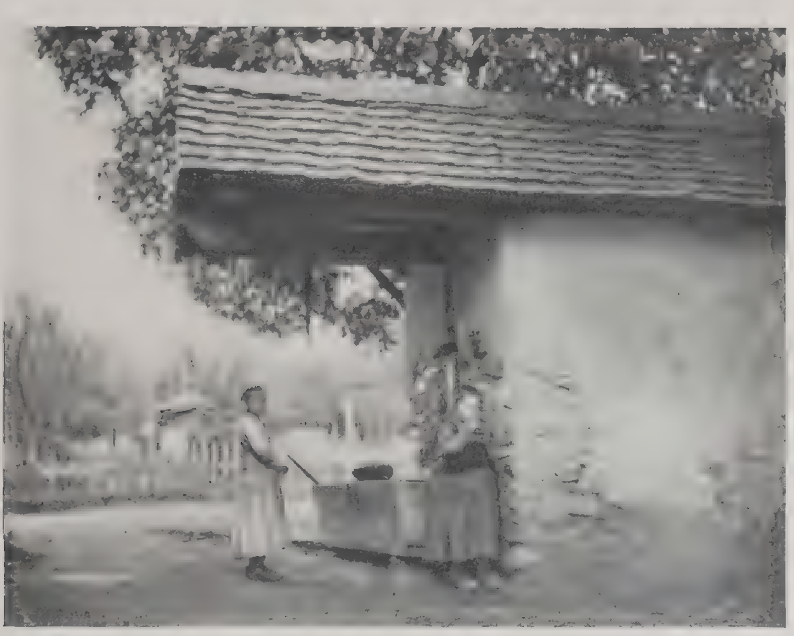


AN ANCIENT FOUNTAIN AT INTERLAKEN. By W. G. CORTHELL.

The Forums of the Peasants

WENDELL G. CORTHELL

THERE is no more interesting or more useful forum in New England than the town meeting, where every voter has a welcome and a chance to have his say. The Northerner in our country does not feel at home in outdoor discussion. He wants a hall and a crowd.

All men have had, and must have, some kind of common ground where they may meet other men as equals and talk over the affairs of the day. The Romans, not only in their capital, but in all their cities, had public forums, where the citizens were free to meet, and ofttimes dangerously free to talk.

Business men of to-day find in the various "boards," and even the "curb," a good meeting-place for modern exchange of property and ideas. The country store has long been a favorite resort for the exchange of political opinions and neighborhood gossip.

The peasantry of Europe are not devoid of the desire so common in man to meet and "talk it over." The traveler from our prosaic and more conventional country is ever charmed by the street markets, and especially by the fountain forums of many Continental peoples. How often has he watched the hard-working peasant as he chatted with a fellow laborer. As the "laborers" of Europe are as much women as men, one is always finding them by the village fountain.

What town does not provide the ever running water in the squares, or along the road, flowing into and out of the great stone troughs which are built to last for centuries? Berne, the capital of Switzerland, has no less than twenty-one famous public fountains where all may go to get water to carry to their homes.

The long stone troughs are often divided, so that one end may be used for washing clothes, while the other is reserved for cleaning vegetables.

IN OLD BERNE. By W. G. Corthell.

Night and day, through the years and centuries, the clear water runs into these public fountains, and about them centre the gossip and much of the discussion of the affairs of the hard-working peasant. Women often stand in line waiting their turn to fill great casks, which are carried on the back to houses where no modern improvement of running water in pipes is known.

There is always a fascination in the running of pure water. Old and young gather about the source of the supply of life. Women who have long been grandmothers are there hard at work on somebody's washing, and even little children are proud to have their share in the primitive laundry, which is not limited to Monday, but continues on through all the week. What a field for the photographer. What a foreign air is about these peasant forums. You know that no American picture can show such a peculiar life. It is decidedly European and picturesque. You find these subjects everywhere. In Swiss cities, and in every town, even far up the valleys, where no engine ever brought the rush of the world to the lonely peasant, running water is everywhere.

Germany is replete with these fountains ; so is Italy, from the famous bronze well of the Palace of the Doges in Venice to the more humble meeting-place of the Cathedral fountain in Amalfi.

But of all countries, Switzerland is the land of forums. The Swiss are democratic ; they like to meet around the village fountain and know that the national fluid is still running. The mountains and the valleys unite to keep the forums supplied, so that the streams shall never run dry, and in every city and village in all the land, when the hard-working peasant is deep in slumber, the streams in a thousand stone fountains are making merry music all alone in the forums of the people.

The writer has often been asked for advice as to the best way to secure nine good pictures out of ten exposures made in other lands. Not every one cares to waste a whole trip learning experience for the second one. In this case experience may be a good teacher, but when the lesson is learned the foreign scenes are things of the past and live only in memory. Much may be learned from the costly experience of others. It was my pleasure to expose 500 films during six months in Europe last summer, and even with all the drawbacks of improvised dark rooms for developing, I have 475 fairly good negatives. Had the new developing machine been on the market the result would have been better in number and quality.

The coming summer thousands of Americans will wander about the Old World with cameras, and many of them with anxious hearts as to the outcome of their pictorial work. Of course those who know nothing about photography will take fixed focus cameras and bring their rolls home to be developed and printed by the dealer. But to those who know something about the work at home but fear to tread new paths I offer a little advice as the result of several tours in other lands.

After much thought I took a No. 3 folding

IN A MOUNTAIN VILLAGE.

pocket Kodak with a Wollensak shutter and Goerz lens, and would do the same again. While the pictures are small, yet they are clear, and I have four times as many as I would have taken with a larger camera, which would often have been in the way or left at the hotel. I had a very light and compact tripod, but used it rarely.

FAR UP THE RHONE VALLEY.

I took many snap-shots in the rain with the diaphragm wide open and time down to one-tenth second, and always with fairly good results. It was vital at first I should know the range of the focus. If a street scene were twenty feet away, what space would the lens cover when set at that figure? By a series of experiments before going I found the depth or range of focus to be as follows: When diaphragm was set at No. 3 or 4 and focus set at 8 feet, then all between six and ten feet was in focus. When set at 13 feet the range was from 7 to 16 feet. When set at 19 feet all between 10 and 25 feet was in focus. When set at 38 feet all between 14 and 50 feet was in focus. And when set at 100 feet all at and beyond 30 feet was in good focus. Stops 8 and 16 had a little wider range, the variation being mostly at a distance and not nearer the camera. And stop 16 when set at 38 feet the range was from 10 feet to 150 feet. And all stops when set at 100 feet the range was from 30 feet to any distance. Better set at too many feet rather than too near.

A QUIET FORUM.

A BADEN-BADEN FORUM. By W. G. Corthell.

I took the Photo-Beacon exposure tables, and next time shall take a Wynn meter, the new one being a great aid in strange places and circumstances. Most people under exposure. Far better over expose. There is a wide range in exposure, and better err on the strong side. Correct exposure does not mean an absolute time. Correct exposure for a scene might be anywhere from 1-10 second to 1 second and the result the same for all practical purposes. This is the secret of the success of the developing machine. By all means take one of the machines and know every few days how things are going. In the confusion of a hundred other things to think of in traveling you may have omitted some important item in picture-making which will be discovered and corrected if you develop as you go along. Take, for comparison, a few perfect negatives. You may forget how a good thing looks.

Films can be purchased anywhere and everywhere in Europe. They are more plentiful there than here. When you are in London or Paris lay in a stock at the Kodak headquarters. You are sure to get the freshest there. Always look at the date and know that it is well ahead. Better not try other makes which will probably prove inferior.

If you do not take a developing machine then hold your films till you find a good dark room in a hotel. Many hotels have them, and so advertise. Developing films in one's chamber in a country where it is not dark till nine or ten o'clock is tiresome. Many a film has been spoiled on a washstand. The writer developed in dark rooms in hotels, at the dealers, and in his own room. When using hotel dark rooms he always took the films after washing and put them through glycerine in his own room and dried them on the inside of the wardrobe door. There is not much fun in waiting till ten o'clock and darkness in one's room and then working and washing two hours while one's wife wants to go to sleep after a hard day's work, or in getting to work in the dark room of a dealer who does not understand your language or you his, and then have the door banged by some new customer who talks a jargon that is as clear to you as yours to him. Moral, take a machine.

I would not advise much printing. If a few trial tests are to be made use Solio, but do not stop to tone them. Of course Eastman's Sepia paper is the simplest of all papers.

Do not blue print, or you will have no time to do anything else, and one does want to see a little of the country by daylight.

There is one golden maxim which we all need at home and abroad in taking pictures: "See how little, not how much, we can get in a picture." Study simplicity. Don't crowd in too much.

Buy postal cards of buildings, etc., and take street scenes and things you cannot buy, and you will have an illustrated diary of your journey that will remain a joy to you and your friends for years.

ANTICIPATION. Enlargement. Taken with a Cartridge Kodak. MRS. C. G. BULL.

BULL'S-EYE KODAK. Mrs. Helen W. Cooke.

Photography as Applied to Illustration and Printing

[Abstract of Cantor Lecture delivered at the Society of Arts, London]

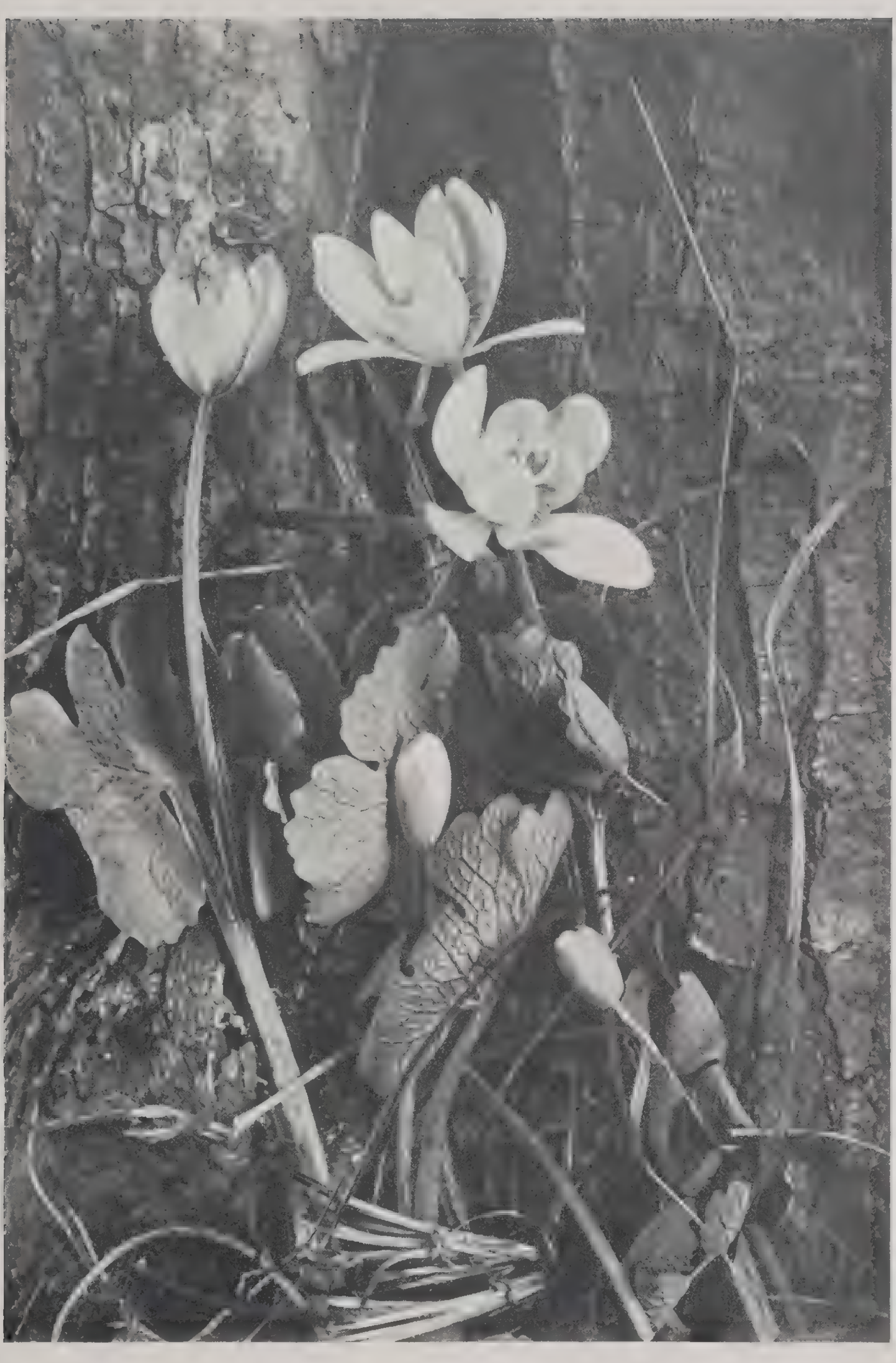
J. H. GEDDES

Photogravure.

HISTORICALLY, photogravure, or heliogravure, is quite the earliest process of photomechanical printing rendered practical for the uses of illustration by the printing-press, and its history is full of interest for the student and experimentalist. We are, however, not concerned specially in matters historical this evening, and I am expected to explain to you only its principles, some methods, and just how the process stands to-day in its relation to modern illustration.

Photo-intaglio engraving, as its name implies, is just the opposite in effect to the photo-relief blocks which were described in the first lecture. The principles of working are, however, practically the same as for type blocks, the results being obtained by the employment of a photographic image in combination with bichromated gelatin. The lines or gradation of the picture are sunk below the general surface of the metal, and the inking of the picture, instead of being done by means of a roller, is effected by forcing the ink into the sunk lines with a dabber, the surface of the metal representing the subject is then wiped clean, and the impression is made by pressing a soft, sized paper in contact with the plate by heavy pressure; the pressure forces the paper into the inked lines or depressions forming the picture, and brings away the ink—the tones of the picture being represented by dark masses of ink in the deepest depressions, and by lighter gradations in the shallower portions, until the surface of the metal is reached, giving pure white.

Whilst photogravure justly stands at the head of all processes for artistic illustration, it is one which calls for more individual skill on the part of the engraver than almost any other. There is much uncertainty in the general results, and



"Sanguinaria, from whose brittle stem
The red drops fall like blood."

By L. B. Baynes.

often more than one plate must be etched before a satisfactory effect is obtained, even then sometimes a good deal of help must be given to the plate by means of the burnisher, scraper, and graver, operations which remove the process from the mechanical, and call for higher artistic qualities than are generally essential for other processes.

The importance of the process renders it desirable that some demonstration of its working should be given, so that the uninitiated may better understand its principles, and I am glad to state I shall be enabled to show you some of the practical details this evening, through the kindness of Mr. Howard Farmer, who has sent Mr. Symmons equipped in order to render us this service. The various operations will be slower than my description, but if you will permit it, I propose to make a break in my paper at one or two intervals, to tell you the essential points as the experiment progresses.

There are several methods of preparing photogravure plates, notably Fox Talbot's process, invented just about fifty years ago, and which is to-day, in practice, the principal of the most modern process; Klic's process, a modification of Fox Talbot's; Woodbury's process, which is, I believe, adopted by the French house of Boussod, Valadon, and Co.; Waterhouse's process, in which an electrotype plate is prepared from a sand-grained, gelatin relief; Dr. Albert's process, and many others, only differing in slight details from the first-named.

The operations of preparing a photogravure plate by the process founded by Fox Talbot, are as follows: — The first requisite is a transparency or positive picture on glass of the subject which it is desired to engrave; the transparency may be made by the carbon process, or by any of the dry plate processes, but if the latter is used the transparency must be reversed. This positive on glass should be as perfect as possible, free from spots or defects, and full of detail. A piece of finely polished copper is next selected, and carefully cleaned with Tripoli powder and water until the surface is free from the slightest trace of grease; after drying, the plate is ready to receive a graining of powdered asphalt or resin, so that the photographic image, when etched into the plate, will have the necessary roughness or grain to hold the ink required for printing. The powdered asphalt is placed in a box with an arrangement for creating a cloud of asphalt dust within the box, depending on the kind of grain required, whether coarse, or medium, or fine. An interval of some minutes is allowed to elapse before opening a door in the side of the graining-box and placing the plate face upwards for the dust to fall upon it. Three minutes is generally sufficient to ensure that the copper surface is evenly coated with the grains of asphalt. The plate is then taken out and placed on a plate of sheet-iron under which is a Bunsen burner, or is held over a flame of gas, to melt the powder so that it adheres firmly to the copper. As soon as it is cold the copper is ready for the next operation, namely, to have the gelatin resist carrying the picture transferred to it. The gelatin resist is prepared by printing an image from the transparency already referred to on a piece of sensitized carbon tissue, which is a surface of gelatin (backed with paper) mixed with some pigment like oxide of iron or carbon, and sensitized with bichromate of ammonia. The printing is carried out in the same way as for an ordinary carbon print, save that the resulting image is negative instead of positive. The printed carbon paper is immersed in water for a few minutes, and is then squeegeed to the grained copper surface, and developed with warm water until all the unacted-upon gelatine is dissolved, leaving only the negative picture on the metal. This print forms the "resist" for the subsequent etching-in of the picture, and carries the whole of the gradations of tone of the picture. As soon as the print is dry (it can be dried either spontaneously, or, if the grain is asphalt, by the application of methylated spirit) the etching of the plate may be proceeded with, but it is an operation requiring some care and skill in order to secure perfect results. The etching solution is perchloride of iron, which should be pure and neutral; the strength of the solution is important. Generally speaking, three strengths of solution are required, the first, tested by Beaumé's hydrometer, should register 38 to 40 degrees, and only attack the deepest shadows of the plate. Four or five minutes' etching with this solution is usually sufficient; then a solution of 35 degrees replaces the first, and the etching will be extended to the middle or half-tones for another period of four or five minutes; the third strength of solution is next taken, and the etching will attack the lighter tones up to the high lights. As soon as this is apparent, the etching is complete, and the plate is plunged in water, and carefully washed, the resist and protection varnish removed, and the plate is ready for proofing in the press.

The graining of asphalt mentioned is commonly used for giving the etched surface a sufficient "bite" to hold the printing ink, but there are several other grains employed, notably, the mechanically ruled screen grain seen in half-tone blocks. This grain cannot be applied to the copper in the same way as resin or asphalt powder, but it can easily be added to the transparency used for printing the resist, or it can be printed on the carbon resist carrying the picture by giving it a short

AN ARAB FUNERAL. Miss C. Pendleton.

Cartridge Kodak.

secondary exposure after the picture image has been printed. The advantage of the mechanical screen is that it gives a stronger grain to the plate, and admits of larger and more rapid printing. Photogravure plates of this kind deeply etched may be printed from at the rate of 500 or more per hour in a copperplate-printing machine. The Rembrandt intaglio process, which, by the way, is a secret one, employs a grain of this nature, and from my observation it gives softer and smoother results than ordinary photogravure, though it lacks the brilliancy and strength of the latter. I cannot tell you how the process of Rembrandt intaglio printing is carried out, but from experiments I have made in this direction I am inclined to the opinion that the plates are bent on to a cylinder of a machine similar to that used for printing wall-papers, and that an ink composed of dextrine or starch with a pigment replaces the usual greasy ink, also that a scraper or knife is used for "wiping" the plate, in the same way as in the old process of Docteur printing. I have some examples printed in this way which closely approach the Rembrandt.

Collotype.

I have on the syllabus of subjects to be considered this evening, the processes of collotype and Woodbury-type printing; either of them would supply abundance of interesting material for an entire paper, but the limited time at our disposal will admit of my giving you little more than an outline of their principles and working. The collotype process is worked universally, and is know by a variety of names; the Germans call it "Lichtdruck," the French "Phototypie," the Americans "Phototype," and we English have given it the titles of "Photo-print," "Heliotype," "Autotype," "Photophane," "Photomezzo-type," "Graphotone," etc.

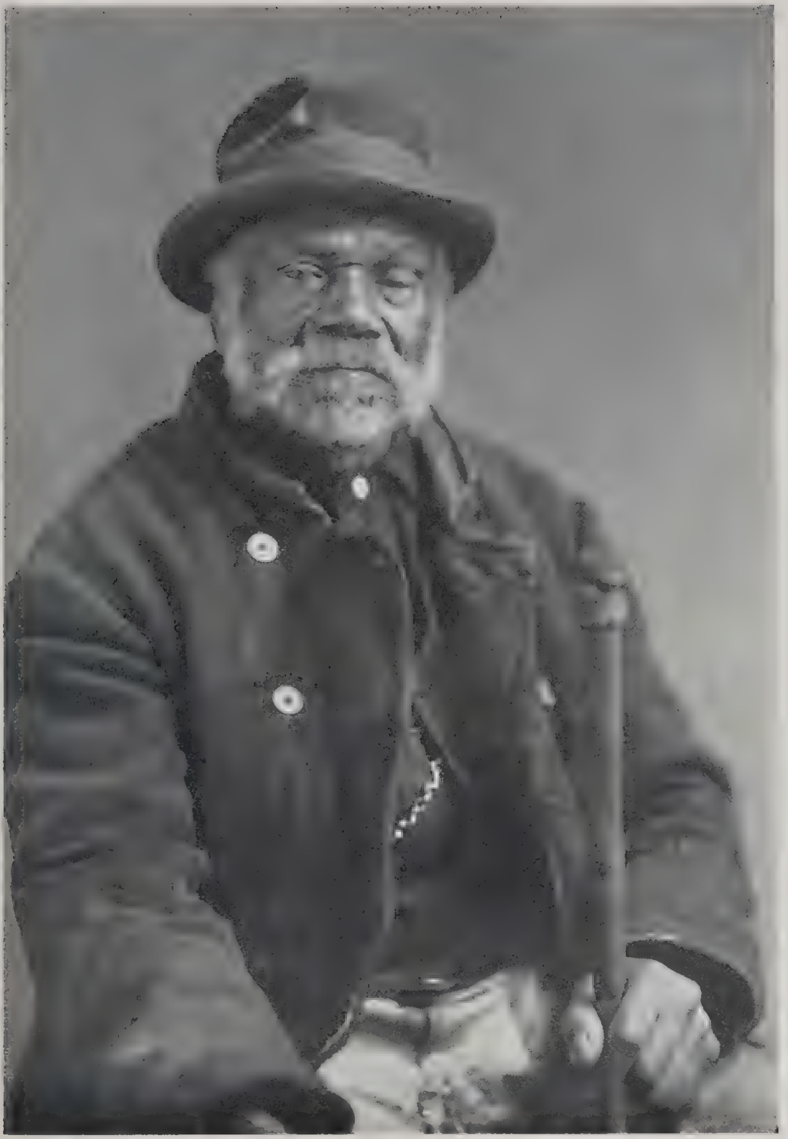
The process is based on the well-known action of light on bichromatized gelatin, and is allied to photo-lithography, with this difference that in collotype the exposed image in gelatin is employed for the actual printing surface, and not only can line subjects be printed from it but copies of photographs, paintings, and drawings. It renders half-tones so accurately that when prints by collotype process are made on highly-glazed paper, with a suitable ink there is scarcely any preceptible difference between them and ordinary silver prints; platinotype and bromide prints can also be closely imitated. The process is largely used for the production of view books, facsimile copies of engravings, copies of paintings, "art study" portrait work, and for commercial illustrations. I have explained in a previous paper that when a film of bichromate mixed with gelatin is exposed to light under a negative, then washed and dried, it will, when treated like a lithographic stone, absorb water where the gelatin film was protected from light by the dense portions of the negative, and will take ink and form a printing surface in the places where light has obtained access to the film through the negative. A collotype plate will not only take ink where absolutely clear glass occurs in the negative, but it will take ink in the half-tone in exact gradations corresponding to the amount of light passing through the negative. This property is most valuable, and, as a matter of fact, constitutes the process.

The preparation of collotype plates is not difficult, and the operations can be described in a few minutes. The printing plate is formed of a piece of plate glass of about ½ in. in thickness, ground on the printing side to give a better hold to the gelatin. In order that the film may withstand the heavy pressure of the printing-press, it is found necessary to coat the plates first with a substance containing albumen, water-glass, and water. This solution is spread over the cleaned glass in a thin coating and dried. The sensitizing solution for collotype printing is composed of Coignet's gelatin 3oz., albumen 1oz., water 25oz., and bichromate potash ½ oz. The exact proportions are not arbitrary, and different operators modify their solution as experience guides. The sensitizing solution is carefully filtered through flannel, and, whilst warm, is poured over the surface of the "substratumed" glass plate in a fairly thick film; the coated plate is then placed on accurately leveled supports in a drying-chamber or box, and heat is applied to the bottom of the box, which is made of sheet iron. Considerable heat is required to dry the plates, and the grain or texture of the plate is affected by the speed of the drying; about four hours is the usual time occupied. When the plate is dry and cool, it is ready for exposure under the negative; the qualities necessary in a collotype negative are that it must be reversed, and be of full printing strength. A negative that would render a full rich print by any silver printing process is the proper standard for collotype. The margins of the negative are masked with thin opaque paper or tin-foil, so as to permit of the picture being printed with a clean edge on paper with proper margins. The time required for the exposure under ordinary conditions, as regards light, is from twenty minutes to half an hour, but this is a matter which only can be fixed by experience. The image on the plate cannot be examined during exposure, and an actinometer scale is used for gauging the amount of light. After exposure, the plate is taken into a room lighted a dull or yellow light, and washed in running water for about half an hour in order that all the soluble unacted-upon bichromate may be removed from the film, after which the plate is allowed to dry spontaneously, when it is ready for printing.

The printing may be performed in an ordinary Albion press used for letterpress printing, or in a lithographic press. For rapid printing, or for long runs, special steam-driven presses are constructed with cylinder pressure, on which it is possible to print two or three hundred copies per hour.

When the plate is fixed in position in the press, it is first wet all over with a sponge and water, or with a solution of common salt, glycerine, and water, which, after being allowed to act on the gelatin for ten or fifteen minutes, is sponged off and the plate is rolled up with ink. If the printing is being done on a hand press, a coating of ink is applied first with a leather roller, which inks up the shadows and stronger parts of the picture. This inking is then followed by another with a gelatin roller, which inks up the half-tones and details of the subject. A sheet of ordinary printing-paper is now placed over the inked surface, and pressure is applied. The result is a permanent ink print on paper of the negative used. If the printing is done on a steam press, the operations, are of course, more mechanical, but the finished result is practically the same. Large plates can be successfully dealt with at machine, and pictures on paper up to 40 in. by 30 in. can be printed.

The collotype process has had a long and successful career, and the beauty and delicacy of its results, when properly printed, are fully equal to that of any photo-mechanical process, but of late years the advances made in half-tone blocks, and more especially in the machinery constructed for printing them, has to some extent covered the ground hitherto occupied by collotype illustrations alone, and though the half-tone block can never oust or replace collotype for many kinds of illustration, yet it is sufficiently a rival to restrict its expansion and scope from a commercial point of view.



The Color Problem in a Nutshell

Thomas Sparrow, the subject of this picture, was born a slave, in New Berne, N. C., May 28, 1826. His master was Amos Wade, who had a large machine shop in Wilmington, N. C. Thomas learned his trade and served five years, then went as engineer on the Charlottesville & Danville Railroad. At the breaking out of the war, when United States troops took New Berne, he ran away and became cook for General Foster. At the close of the war he came North and settled in Dedham, Mass. He had twelve brothers and thirteen sisters. He was the father of sixteen children, none of them now living. He has never used tobacco nor liquor in any form; is still well and does gardening for a living.

He had a good master. After he learned his trade he went where he liked, and paid his master a certain part of his wages. Thomas says if it had not been for the war he would not have to work now, as his master would have looked after him.

Thoughts for the Thoughtful

You must look at pictures studiously, earnestly, honestly. It will take years before you come to a full appreciation of art; but when, at last, you have it, you will be possessed of one of the purest, loftiest, and most ennobling pleasures that the civilized world can offer you. —*J. C. van Dyke.*

Pictures, like people, have individual character and charm, and he gets most pleasure out of them who takes them for what they are, not criticizing them for their failure to be something else. — *Emery.*

Beauty, which is the natural food of a healthy imagination, should be sought after by every one who wishes to achieve the great end of existence — that is, to make the most of himself. — *Blackie.*

Simplicity is a great beauty in decoration. If the unit be cut up into many petty parts this beauty is lost.

> " Teach them the music fine
> In the curve of a perfect line."

Art is the love of certain balanced proportions and relations which the mind likes to discover and bring out in what it deals with, be it thought or the actions of men, or the influences of nature, or the material things in which necessity makes it to work. — *La Farge.*

WET PAVEMENTS. Mr. Wm. C. Motteram.
Cartridge Kodak.

Dr. Miethe's Three-Color Process

Of the attempts hitherto made to prepare photographs in natural colors, only those which are usually called indirect methods have led to useful results. These might also be called combination color processes, since in them the natural colors of the objects photographed are reproduced by the combination of several (as a rule three) monochromatic partial images. The color-analysis, that is, the separation of the natural colors into three portions by means of color-sensitive plates and suitable ray filters, is nearly identical in all the indirect methods, but they may be divided according to the method of color-synthesis which is used. In a part of them, the "additive methods," the three partial images are optically superimposed by the aid of light-filters which exactly correspond with those used for the preparation of the respective negatives (*i. e.*, red + green = yellow; yellow + violet = white). These methods offer no practical difficulties, but they also give no actual image and therefore have little practical value. The other group of indirect methods, the "subtractive processes," subtract from white light (*i. e.*, white — green = purple — blue = red — red = black). These methods of indirect color photography may be practically carried out in different ways. One may use for the preparation of the three partial images colored transparent chrome-gelatin reliefs and unite these by superposition to a transparent composite image (here belong the processes of indirect photochromy of Lumiere and Selle, etc.), or one may print the three monochromatic partial images in the photo-mechanical way, one over another, on paper with fatty inks, on a suitable press. This three-color printing process has reached great practical significance, and is much used for illustration and advertising.

Prof. Adolf Miethe, of Charlottenburg, in Germany, has rendered great service to the development of indirect color-photography. He has succeeded in preparing a new coloring matter called ethyl red (a chinolinchinaldiniodalkyl), which makes the gelatin dry-plate nearly equally sensitive for all colors of the spectrum. A panchromatic dry-plate, sensitized according to Miethe's directions, is prepared by Otto Perutz, of Munich, and called the "Perchromo Plate." Also, by bathing an ordinary dry-plate in a very dilute solution (1 : 50,000) of this coloring matter one obtains a plate which is nearly equally sensitive for all spectral colors, and therefore suitable for three-color work, and which keeps a very long time when it is well washed after bathing. Further, Miethe has succeeded in preparing the necessary light-filters for the absorption of certain kinds of rays very exactly, for use with the panchromatic plate. These light-filters divide the spectrum into the three following inclusive zones: 400-490, 490-589, and 589-700 millionth-millimeters wave-length, respectively. The divisions lie very near the F and D-lines. The relative exposures with these filters and the above-mentioned panchromatic plates are two (blue), one (green), two and one half (red); in practice, it would probably be preferable to expose equally long with all three filters, and to

TABBY. By Charlotte Otis LeRoy.

weaken the stronger acting rays by the use of a correspondingly smaller stop. How considerable the sensitiveness of the new alkyl-red plates for green and red is, may be seen from the fact that it was possible to take a group of two persons on a light but sunless morning in September, at 10.30, with Voigtlander's Portrait Anastigmat, stop F:12.5, with exposures of one and one half seconds for blue, three fourths second for green, and one and three fourths seconds for red, the whole exposure being thus but four seconds. Under such circumstances it is now possible to reproduce not only landscapes, but also portraits of persons and groups by three-color printing processes or through the additive methods of indirect three-color photography. The coloring of pictures made by Dr. Miethe's process must be characterized as very pure and true to nature.

In the development of ethyl-red plates the ordinary red dark-room light cannot be used, since the plate is seriously affected by it. Miethe recommends the preparation of dark-room lantern panes from fixed gelatin plates, of which part are bathed in brilliant yellow, 10:300, and part in methyl violet, 1:100. After a brief washing and thorough drying two of these plates of different colors are laid face to face and bound together. If the pictures are to be used not for three-color printing, but for polychromatic projection, lantern slides are made as usual from the three negatives and used in a triple lantern provided with color filters which correspond with those used in the preparation of the negatives. With properly chosen colors, the three lights falling together upon the screen unite to form white. Each lantern slide gives a colored partial image, and as they exactly register upon the screen, a picture in natural colors is the result. In the great three-color projection apparatus recently installed in the Berlin Urania, under Dr. Miethe's direction, the three-color filters serve also as cooling cells to keep the condensers from cracking.

STEPS TO OLD MONASTERY, Sorrento, Italy. Miss Jeannie Evans.
Bull's-Eye Kodak

JONQUILS. By ARTHUR K. WILMARTH.

Two Views

Written for the Photo Era

"Look!" said Brown, of the ruddy nose,
"At that man Jones in his camera clothes;
Starting out for a five-mile jaunt,
No wonder he's thin and long and gaunt."

"Look!" said Jones, of the healthy tan,
"Brown looks less and less like a man,
But more and more like a bock-beer sign.
Why don't he take up a sport like mine?"

—Lilian M. Ratcliffe.

The Suppression of Alkalies in Development

IN a preceding issue we have given various formulæ for the use of acetone in lieu of alkalies in developing baths. MM. A. and L. Lumiere and Seyewetz, who introduced this new process of development, have recently published the results of new researches in the same direction, and found in the paraformaldehyde a substance which well deserves to retain our attention. Though it is insoluble in water, it dissolves readily in sodium sulphite, and this solution, which has none of the inconveniences of the alkalies, may be used in their place in all the developers which call for alkalies, and, moreover, it possesses the property of hardening and even insolubilizing the gelatine.

CLOISTERS, BOSTON PUBLIC LIBRARY.

WM. D. GRIER.

Taken at 3 P. M., cloudy light, Collinear Lens. Stop F : 22, five seconds' exposure, Orthonon plate.

It has been found that an exceedingly small amount of this substance is needed For instance, with hydrochinon, where one hundred parts of alkali is required, only one part paraformaldehyde is sufficient to produce the same effect. In order to avoid the difficulty of weighing such a small amount of substance, the authors make use of a mixture of paraformaldehyde and anhydrous sodium sulphite, and have given the name of formosulphite to a mixture of 3 parts paraformaldehyde and 100 parts anhydrous sodium sulphite. A stock solution can be made by dissolving 28 grams of formosulphite in 100 cc. of water.

The best results have been obtained by developers of the following formulæ :

PYROGALLIC DEVELOPER.

Water	100 cc.
Formosulphite .	9 grms.
Pyrogallic Acid .	1 grm.

HYDROCHINON DEVELOPER.

Water	100 cc.
Formosulphite .	9 grms.
Hydrochinon .	1 grm.

METOL DEVELOPER.

Water	100 cc.
Formosulphite .	9 grms.
Metol	1 grm.

PARAMIDOPHENOL DEVELOPER.

Water	100 cc.
Formosulphite .	14 grms.
Paramidophenol	1 grm.

METOL-HYDROCHINON DEVELOPER.

Water . . .	100 cc.
Formosulphite .	8 grms.
Metol . . .	0 grm., 5
Hydrochinon .	1 grm.

HYDRAMINE DEVELOPER.

Water . . .	100 cc.
Formosulphite .	5 grms.
Hydramine . .	0 grm., 5
Potassium Bromide (10% solution)	1 cc.

ICONOGENE DEVELOPER.

Water . . .	100 cc.
Formosulphite .	9 grms.
Iconogene . .	1 grm., 5

PYROCATECHINE DEVELOPER.

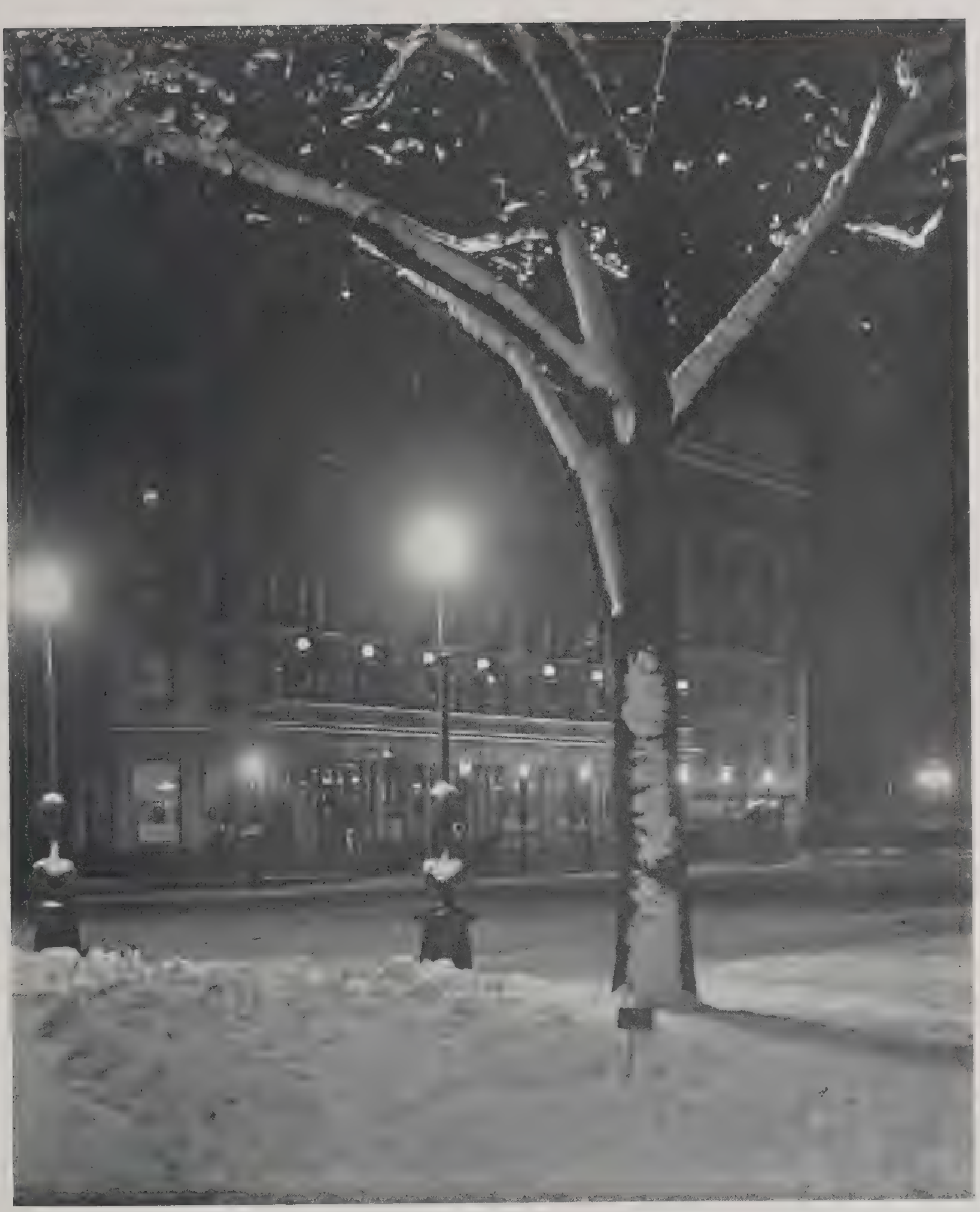
Water	100 cc.
Formosulphite . .	14 grms.
Pyrocatechine . .	1 grm.

As usual, potassium bromide may be added as restrainer to these developers, in case of overexposure. On the contrary, when the plate is underexposed, an extra addition of formosulphite acts in the same way as an excess of alkali.

As the solution of paraformaldehyde in sodium sulphite has the property of insolubilizing the gelatine, the authors have also tried to use it instead of alum in toning-fixing baths, but it has been found necessary to use only a very small quantity of sulphite, for too great an excess of that salt would alter the toning property of the bath. A mixture of 1 part paraformaldehyde, 10 parts anhydrous sodium sulphite, and 40 parts sodium chloride is best used for the purpose, 2 grams of the mixture taking the place of 10-15 grams alum ; a 1 per cent solution insolubilizes in a few minutes the gelatine on papers, so that they can afterward be treated by boiling water, if desired.

In fixing bath for plates, paraformaldehyde can also take the place of alum, but an excess is to be avoided, for the contraction could be so great as to detach the gelatine from the glass.

DR. E. J.



NIGHT, FIFTH AVENUE, NEW YORK CITY. By ARTHUR HEWITT.

Copyright by the *Outlook Co.*, 1903.

Some Schemes for Enlarging in the Camera

WILLIAM PERRY HOPKINS

LIKE to make enlargements, but haven't sufficient bellows-length, eh?

Well, lots of others have felt the same restriction. I've learned how to get around it, to some extent. What's more, I'll tell *you.*

Somewhere or other I've read that the first thing an amateur generally does is to buy a small camera and then wish he had bought a larger one. The same applies to bellows-length.

It seems a generally wise thing to do nowadays to purchase a view-camera (second hand will usually do) somewhat larger than, and in addition to, your regular camera. The increasing use of fine lenses makes it possible to use the 5 x 7 lens, for instance, in an 8 x 10 view-camera for wide angle work with a small stop.

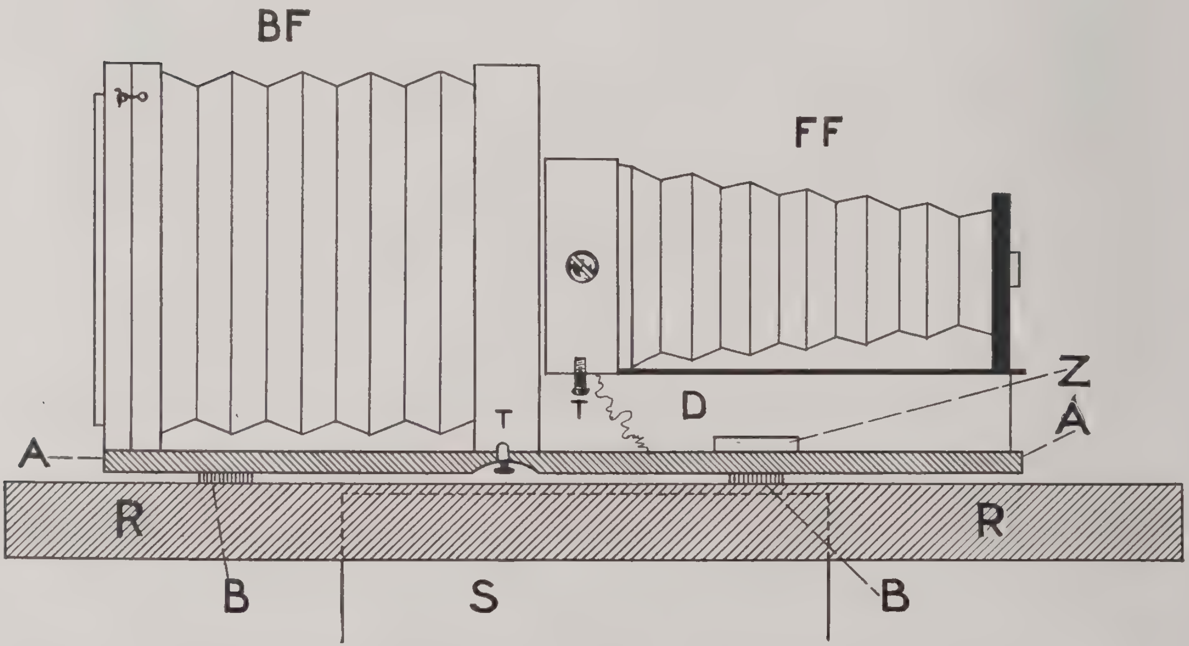
I assume you've got such a view-camera. If not, don't rush off and order a new one, unless you know of a "bargain." I got a very good second-hand Scovill & Adams view-camera in 8 x 10 for $8, with an 18-inch bellows. I've since seen rather less convenient models offered at $10, brand new, with a holder.

But I must return to the scheme. It is nothing more nor less than taking the front board out of the view-camera, and the ground glass and reversible back out of the other camera, and setting the two together. Then, when you've racked out the bellows in front of the hand-camera and out behind the view-camera — there you have your focal length. No need to buy a camera which you can use only for enlargements. Keep your money for something else, and still have two cameras for various uses.

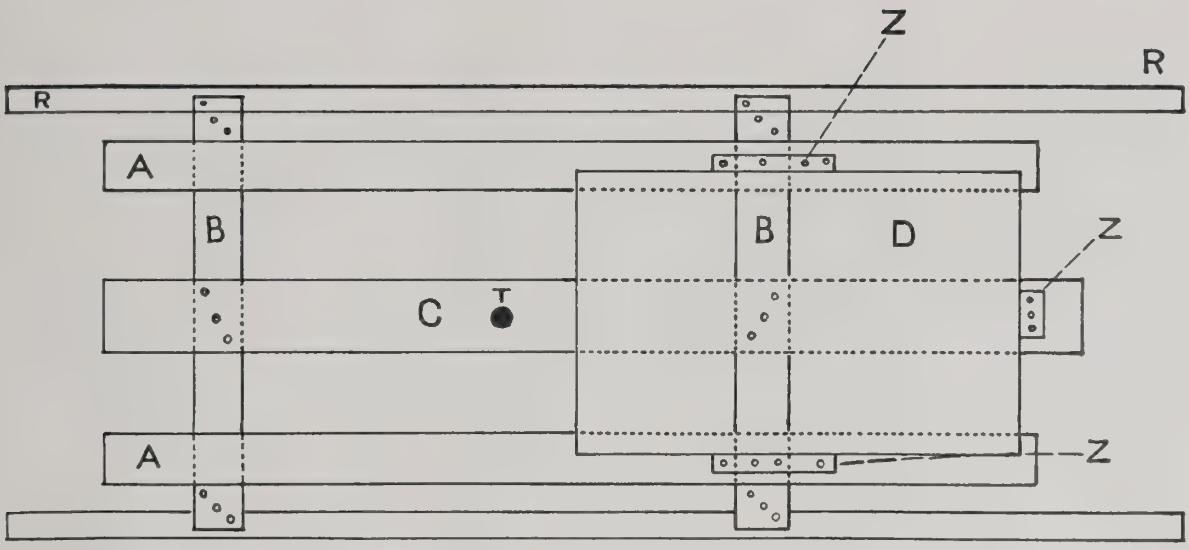
Let me fall back on personal experience, and tell you how I manage.

My hand-camera is a 5 x 7 Premo, with about 20-inch bellows-length; with my 8 x 10 view-camera of 18-inch bellows I get a total of about 37 inches. I got a light-weight box at the grocer's (about a yard high and half a yard square), to the top of which, standing on end, I nailed two pieces of wainscoting about four feet long, projecting half an inch above the top. This serves as an almost frictionless runway.

Then I took some strips of wainscot and built (very roughly, for I'm no carpenter) a frame which would set across the runway like a letter H turned on its side.



AA. Side strips resting on cross strips. BB. Cross strips resting on runways. C. Center strip holding tripod screw for large camera. D. Box resting on center strip to hold small camera. FF. Front focus camera. BF. Back focus camera. R. Runway nailed to top edge of box. S. Supporting box. TT. Tripods in position to hold camera. Z. Zinc strip to hold box to side strips.



Two cross pieces, BB, make it square and staunch. A center-piece strip, C, runs out in front some six inches farther than the side pieces, AA.

The two cameras (each with bellows extended) are set upon the frame so made, and position of the tripod plates is marked. Then the strip C is bored with a gimlet (or burnt with a hot wire or nail) to let the tripod screw go through. If the wood is too thick, chop out a bit from the bottom with a chisel — never mind if it *does* look rough. Then set the view-camera on the strip, and make it fast with the tripod screw. Find a light box rather long and narrow — say, twelve inches wide and twenty inches long — and high enough to hold the hand-camera so the center of the lens is opposite the center of the ground glass on the view-camera. (Cut it down if it's too high.) You can guess at it within a quarter inch, and that's near enough for most purposes. But rule it exactly, if you wish. This narrow box should rest, bottom side up, on the front of strip C, thus giving a firm support to the smaller camera when the bellows is racked out.

To fasten the narrow box to the strip C a couple of pieces of tin or zinc are pierced with holes and nailed to the strip and the box sides, after first having cut out a place from the end of the box which is to be to the rear. (This hole is to permit the hand to be inserted to tighten the tripod screw under the smaller camera).

A third piece of tin will prevent the long box rocking about if fastened to the front end of the box and the strip C.

There's nothing more to be done now, save to put a piece of black cloth around (or some thick felt *between*) the two cameras to keep out the light. Afterward you can go ahead, just as though it were all a single camera.

The idea of making a runway on the box-top in the first place is not *necessary*, but it avoids moving the box itself backward and forward to regulate the distance from lens to negative.

As a rule one can be sure of the parallelism of negative and paper by measuring, but if you're inclined to do more carpenter work than I did you can either groove the side pieces AA or nail a second strip outside them. If you think you can guess the distance and parallelism with your eye you need not put such side-strips on the carrying-frame at all. The ends of the cross strips BB will answer as bearing on the runway.

With the outfit mentioned and a lens of eight and one half inches focus I can get an enlargement on my view-camera ground glass of a little over three diameters; that is, a tree which appears to be two inches high and one inch broad on my negative will appear six inches high and three inches wide on the ground glass. A small head in a group on a four by five will come out about cabinet size.

Of course, if you have an extremely long-focus camera to start with — say thirty-two or thirty-three inches on the 5 x 7 size — you may get nearly five times enlargements; and if your view camera is a long-focus also — of say twenty-seven or twenty-eight inches — a bit over six diameters may be obtained.

As to the frame for the bromide paper, you say? I was just coming to that.

Mine is the simplest scheme imaginable — *don't use any!*

Instead, clean off an old negative which is worthless and lay it in the plate-holder, and use it same as you would a plate, with the sheet of paper just behind it. It works splendidly, provided you have the thickness of the clear glass equal or nearly equal to the thickness of the ground glass on which you focus.

It's a good idea to rule lines with lead (or slate) pencil on the roughened side of the ground glass. Two diagonal lines from corner to corner will give the center of the glass, and a vertical and horizontal line crossing at the center will give a ready method of squaring the view, in case the negative is not straight, caused by camera not being level at exposure. That makes all the lines you really *need*, but it's mighty convenient to have lines of each plate size up to the size of the ground glass. I have lines ruled for 3¼ x 4¼, 4 x 5, 5 x 7, and 6½ x 8½ on my 8 x 10 glass.

I know you will have understood, ere this, that I don't exactly "hanker" after needless fussing. For that reason you may be interested to know how I hold the negative during exposure.

A frame of four pieces of wainscoting, with half the "groove" cut away, makes a simple holder. It should be equal in size to the view-camera ground glass. To use smaller negatives nothing is handier or cheaper than the inside kits which, beside being light and accurate in size, are fitted with "buttons" to hold smaller ones in place. These buttons on the large frame can be made of a bit of sheet iron or brass, pierced with a hole in the center and attached by a screw, which can be afterward tightened, if necessary, as a nail can not. A piece one fourth inch wide and three fourths inch long is ample to hold an 8 x 10 glass. One at top and another at bottom may be used, or one at or near each corner — whichever way seems preferable.

If you like "neat-looking" affairs you can rig a second frame outside the one which holds the negative and put a piece of ground glass in it, but a sheet or so of tissue may be pasted over, and will do quite as well.

It is well to remember that copying by this method is analogous to photographing *against* the light, and direct sunlight must not strike the *lens* during the exposure. It is a good idea to cover the space from negative to lens by a light-weight, black cloth hood extending from the frame edges and fastened around the front board by a rubber band or tape. You'll notice I say it's a good idea. But I admit I don't practice it. If the sun strikes the lens when I get ready to work I pin a big sheet of ledger paper to the top of the window-sash, so it screens the lens while permitting the light free access from negative to lens. Still, the other way is undeniably *best*. Some day, when I can spare time, I'll fix up mine that way.

I don't know that I'm possessed of any strikingly original notions about enlarging on bromide paper, save that I use more of the gaslight papers than the dark-room ones. On Velox or Vinco, or Rotox or Vinco the process isn't difficult — in daylight. Exposure would be too long by artificial light.

As one second is generally enough for copying full size on Eastman paper in sunlight, I estimate Special Velox at twelve times slower, and Regular Velox four times slower than the special. Rotox (gaslight) paper is said by its makers to be 100 times slower than Rotograph (dark-room) paper. Portrait Cyko is ten times faster than Carbon Cyko. With these notes, it is simple to gauge exposure with a test-slip.

Test-slips for enlargements should be long enough to cover quite a distance of the *length* of the negative, but need be only about a quarter-inch in width. Exposure is tested by withdrawing the slide, say one quarter the length, and exposing for maybe one minute. Then draw it about half an inch farther and give it three minutes there; another half-inch withdrawal follows with another three minutes, and this process is repeated till the slide is nearly or quite out. Then replace it, and carry the holder to the room for development, away from daylight — though gas or kerosene is safe. Having kept track of the different exposures, you will know how much each portion of the paper received; respectively, one, four, seven, ten, and so on, minutes. It will be easy to judge which exposure was correct, or nearest correct, after development in the usual manner, and a second test-slip will seldom be required.

If a sheet of orange glass is placed back of the negative to be enlarged from, it will add two to four times the exposure, depending on the shade of color in the glass. A sheet of blue glass similarly used will add very little to the exposure — perhaps a quarter, and will help out thin negatives considerably. All these figures assume sunlight or very bright daylight. I have made a 2 x 3 enlargement on Special Velox in four minutes from a thin negative backed with ground glass — other negatives have taken twenty minutes on the same day.

A DREAM OF FAIRYLAND. By DR. F. DETLEFSEN.

It is general to recommend some particular developer for one's enlargements other than which the rest are worthless or almost worthless.

I haven't found it that way. I generally use what I happen to have on hand — and I do not complain at the results.

Different developers, however, give a different tone. That is certain. The M-Q of the Velox people gives a delightful "coal-black," when used with *just* the right amount of bromide; Tolidol gives nearest to the "engraver's black" I have yet found; Edinol gives a rather warm-black of specially pleasing tone — and has a decided advantage (to my mind) in that the same solution may be used for either plates or paper — *or first one and then the other.* The Edinol formula referred to is the one for snap-shots and will be furnished on application to the Edinol people (Bayer). Rodinel, while rather less acquainted with me, has given general satisfaction and pleasing tones. It keeps well; but then, so do most any of the others, if stored in bottles well corked and filled to the neck.

Nor have I found any particular make of fixing-bath necessarily better than the rest. The Velox acid-hypo is plenty good enough for me, though plain hypo with acetonesulphite is all right. If you want to be certain of stopping development quickly when once it reaches the proper point, Carbutt's "short-stop" formula for Vinco is excellent. Perhaps it's superfluous to say so, but it pays to dip a print in water and give it a rinse between the developer and the fixing-bath. It makes the fixing-bath last much longer, and saves many spotted prints.

And — well, I guess that's all!

A New Lens

SINCE the discovery of the new Jena Glass enabled the optician to produce new lenses where astigmatism was corrected to a remarkable degree, every energy of the lens-maker has been directed toward producing not only the most perfect results, but also toward reducing the cost of production, always very high in anastigmatic lenses.

A great advance in that direction was realized when it became possible to suppress some of the segments which had been thought necessary to the anastigmatic system. If we reflect but a moment that leading anastigmats have been usually formed of two lenses, each composed again of four thin lenses cemented together, it will be seen that a great economy of expensive material and workmanship would be realized could one but reduce the number of the component parts of each lens. Although this was tried, the results were not altogether satisfactory and could hardly compare with those obtained by the best cemented lenses of the older type.

It has been the privilege of Ross, Ltd. (London), to produce a lens simpler in its component parts than any other first-class anastigmat heretofore on the market, and yet possessing not only the beautiful qualities which distinguished the latter, but having still new features and qualities of its own. The HOMOCENTRIC Lenses, just announced, are composed of but four single segments, forming two lenses in all, against the six or eight segments that usually go to form the two lenses of the regular anastigmat. Yet the definition is just as exquisite, as perfect; the crispness rather superior. The corrections for astigmatism are equal to any, and the secondary aberrations, called technically, "spherical zones," which must not be taken for astigmatism, and which are present in nearly all modern anastigmats, are here avoided altogether, and so perfectly corrected that the resulting image shows a brilliancy and purity rarely met, if at all, in other lenses. It should be added also that the luminosity of these lenses is somewhat brighter than usual, as there are less reflecting surfaces and layers of glass than in the older cemented lenses.

Another and very important advantage of the HOMOCENTRIC lies in the low price. Compared with a lens of similar quality and speed of the cemented type, the difference is often striking. This difference in price is not only accountable to the lesser quantity of costly material, and incidentally decreased cost of labor (four segments instead of eight) that enters into its construction, but also to the fact that it is possible to obtain with uncemented lenses a greater circle of even illumination and definition, consequently offering a wider angle and a greater covering power, which allows us to use a lens of shorter focus to cover the same size plate.

The depth of focus in the HOMOCENTRIC is absolutely remarkable, and thanks to its admirable correction from every defect known in lenses and which it would take too long to mention here, one is able to focus at full aperture on the object, and set afterwards confidently the diaphragm to the stop with which he desires to take the picture, and *without refocussing*. In most modern anastigmats this is impossible, and Zeiss, in their catalogue, specifically gives the advice to focus always with the same stop one is intending to use, lest there be a marked loss of definition by stopping down the diaphragm. If it is reflected, that in many a dark place like interiors, churches, small alleys, confined situations, the light is so weak that it is well-nigh impossible to focus with a small aperture, it will be readily seen what a boon and a blessing the HOMOCENTRIC Lens will be in these cases, when it is only necessary for the operator to focus comfortably with the largest aperture and reduce the stops afterward with a certainty that the most perfect definition will be obtained.

HOMOCENTRIC and all other Ross Lenses are sold by all dealers in this country, the Rochester Optical & Camera Company being the trade representative of the manufacturers.

Foreign Abstracts

Photography of Opaque Objects Mr. Frederick Noad Clark continues in *Knowledge* his valuable notes on the photography of opaque objects. "Perhaps the most useful all-round objective for this work," he says, "is the 2-inch; a lower power than this we have found of no advantage when depth of focus is an object. The use of a stop in the form of an iris diaphragm or a Davis shutter is sometimes necessary, it being fitted just above the objective. This will increase the depth of focus when photographing spherical objects or those lying in different planes; but the exposure is necessarily prolonged. A plate giving the maximum amount of density is necessary. For this purpose any of the well-known makes of isochromatics are best. They must invariably be 'backed.' The developer should be dilute, and if pyro-soda be used (which we recommend) the pyro should be used sparingly. Development ought to be slowly carried on to full density, the aim being to obtain a negative with plenty of contrast, without blocking of the high lights. It is to give this effect that the backed plate is so essential. As to length of exposure no exact information can be given. As a rough guide it has been found that using a 2-inch objective with direct illumination by means of the bull's-eye from a good paraffin lamp with a 1-inch wick, the exposure at 20 diameters will vary from two to three minutes according to the color of the object; a white object naturally requiring a less exposure than a darkly colored one. As further examples we may mention those of Foraminifera at 8 diameters with a 2-inch requiring 30 seconds' exposure, whilst Polycistina at 45 diameters and a 1-inch objective required 30 minutes. The eggs of insects, particularly those of Lepidoptera, lend themselves admirably to photography. Especially suitable are those of the Lycænidæ, or blue butterflies, their small size and elaborate structure rendering them most beautiful objects for opaque photography."

More on Chemical Sensitizers Luppo-Cramer has continued his researches on sensitizers, and states that most bodies capable of absorbing bromine, in contradiction to Vogel's theory, considerably diminish sensitiveness, and never increase it. The investigation further revealed the important fact that the theory is not false in itself, but that it has no application to the existence of the latent image, because the separation of halogen in this process is not only incidental, but apparently actually detrimental. The substances investigated (solutions of silver nitrate, sodium nitrite, sodium sulphite, ammonia, ferrous sulphate, hydrochinon, metol, pyrogallol, potassium ferrocyanide, tannin) act as sensitizers in the direct blackening of silver bromide in the light, because they combine with the bromine set free by long exposure, and apparently thereby hinder the reversal of the process and allow more silver bromide to be decomposed. Since these "sensitizers considerably diminish the sensitiveness in the production of the normal latent image, this proves that in short exposures the bromine separation has no effect in inducing the developability of the silver bromide. A practical experiment in which half of a dry plate was wet with water and the other half with four per cent sodium nitrite solution, after which the whole was exposed to the stage of reversal in a camera, showed that the bromine separation helped along by the nitrite not only did not hasten the formation of the latent image or the reversal, but slowed the first process and completely prevented the solarization. This adds new confirmation to his former researches, already abstracted in our last number. (Phot. Corr., 1903, 40:25).

Amidoacetates in Reducers The much-used Farmer's reducer has the disadvantage of keeping only a short time, since the ferricyanide is quickly reduced by the hypo to the inactive ferrocyanide. Homolka has now found that a completely equivalent but permanent reducer may be made by replacing the hypo by an alkaline salt of amidoacetic acid, which, although completely unaffected by the oxidizing action of the ferricyanide, abundantly dissolves silver oxide. In practice 5 g of potassium ferricyanide are added to 100 c of a 20 per cent solution of sodium amidoacetate, commercially known as "Pinakolsalz-N." The solution keeps indefinitely in dark-colored bottles, and is mixed with five to ten parts of water for use. The reduction proceeds rapidly, the plate becoming covered with a violet-green fog. After rinsing with water, the plate is laid in an acid fixing-bath, in which it immediately becomes clear and brownish black. The solution can be used repeatedly until exhausted. (Phot. Corr., 1903, 40:19).

Foreign Abstracts

The Latent Image and the Photobromide Reaction After the analogy of his experiments with solarized silver bromide films, Luppo-Cramer has applied the photobromide reaction to the normally lighted latent image, and has succeeded in finding a reaction which destroys the normal latent image but leaves intact the small quantity of "photobromide" or "subbromide" which is formed during the exposure, so that it can be physically developed after fixing. This fact is of great significance for the theory of the latent image. Collodion plates which had all received the same exposure were partly treated with strong nitric acid, partly fixed, and partly treated with acid and then fixed. On treating these plates with a physical developer it appeared that the image was completely destroyed on the plate which had been treated with nitric acid alone, while on the plate treated with nitric acid and then fixed there was still a definite image, but much weaker than on the plate which was merely fixed. The nitric acid had therefore completely destroyed the developability of the normal latent image, although an undestroyed silver compound still remained, a chemically changed "germ" substance, which was not able to induce the development of the silver bromide changed by the nitric acid. If this substance is identical with the photobromide of solarization and differs from it only in quantity, cannot be asserted with certainty. This observation also hints strongly that the whole chemical change is merely accessory in the development process, or that at least another process plays a part beside the chemical one. Numerous repetitions of the experiment showed that the physical development of the normal latent image before fixing gives incomparably stronger images than the same treatment after fixing, i. e., that normal physical developability begins before the chemical change (bromine separation) occurs. Physical development therefore appears to be something more than the deposition of nascent silver on the "germs." One must, to explain the latent image, even if the separation of bromine can scarcely be considered as wholly without influence, at the same time assume a change of molecular structure. (Phot. Corr., 1902, 39: 696).

On the Theory of Sensitizers H. W. Vogel's theory of chemical sensitizers, which assumes that absorbers of halogens increase the light-sensitiveness of silver halides because they absorb the halogen set free at the moment of exposure, and thus increase the tendency to react and prevent the reversal of the reaction, is, according to new researches by Luppo-Cramer, not to be wholly accepted. On testing the action of ammonia (sp. gr. 0 91) as a supposed sensitizer of dry plates, before, during, and after the exposure, it appeared, quite contrary to this theory, that ammonia used during the exposure considerably lessens the sensitiveness, while applied before the exposure it has no effect. This effect is stronger with collodion emulsions. One per cent sodium carbonate solution, and still more ten per cent potassium carbonate, increase the sensitiveness by presence during exposure, but this is also the case when the alkali is completely washed out again before exposure. An acid solution of silver nitrate increases the sensitiveness more when it is washed out before exposure than when it is allowed to remain. One per cent hydrochinon solution decreases the sensitiveness, but has no effect when washed out before exposure. That the alkaline carbonates increase the sensitiveness somewhat more when they are present during exposure, than when they are previously removed, need not be explained by their absorption of bromine, since many reactions go faster in the presence of alkalies. (Phot. Corr., 1902, 39: 699).

Trioxymethylen Toning-bath The Lumieres and Seyewetz have shown that trioxymethylen with sodium sulphite can advantageously replace free alkalies or carbonates in the preparation of different phenol developers. The advantages which the mixture of trioxymethylen and sodium sulphite has over alum for toning-baths, are as follows: 1. The mixture reacts alkaline and does not decompose hypo, as acid baths do. Added to the toning-bath, it does not precipitate sulphur. Such baths can be prepared cold, while alum baths must be heated to precipitate sulphur in a filterable form. 2. The combined bath remains clear indefinitely, while the alum bath precipitates constantly. 3. Toned prints treated with alum to render the gelatin insoluble, may have sulphur precipitated internally by decomposition of hypo. Trioxymethylen hardens the gelatin without this danger. 4. It is known that the acid reaction of the alum which remains in the film is dangerous, if every trace of hypo is not carefully removed. As trioxymethylen is alkaline, this danger is less to be feared. (Rev gen. chim. pure appl. 1903, 6: 11).

The Crucible

CRUCIBLE CATATYPY Ostwald and Gros have lately worked out a new copying process for photographers, which gives positive prints from a negative by simple contact, without the influence of light. Catalysis, on which this process depends, is defined by Ostwald as a process by which a possible reaction is accelerated by the presence of a body, the catalyser, which itself remains intact. Great numbers of catalytic reactions are known, of which the following may serve as examples: When cold, dilute acids act on zinc, hydrogen is evolved relatively slowly, but on the addition of a drop of platinum chloride solution, the action becomes tumultuous, the platinum solution acting as a catalyzer. Another reaction is as follows: If an oxidizer, as potassium bromate, is added to pyrogallol solution, the mixture slowly turns brown, but this change becomes very rapid if a few drops of copper chloride solution are added. According to Ostwald there is no reaction which may not be catalytically hastened, and no substance which may not catalytically influence some reaction. For catatypy the most important catalysers are silver and platinum, because these substances in a state of fine subdivision usually form the basis of the photographic image which is to be reproduced. Among some practical details given by the Chemiker-Zeitung, we find the following: If paper coated with the above-mentioned mixture of pyrogallol and potassium bromate is brought into close contact with a platinum print, on the places where the paper is immediately in contact with the metallic platinum, the reaction between the pyrogallol and the oxidizer is so accelerated that a red-brown positive copy of the print is made in from forty five to sixty minutes. This process is not practical, for by repeated use, the platinum print gets a coating of coloring matter and becomes catalytically useless. Hydrogen dioxide, whose solution is strongly catalysed by platinum or silver, is practically very useful. The reaction, which consists in the evolution of oxygen is violently accelerated by these metals.

If, therefore, a photographic silver or platinum image is coated with an aqueous, or better, ethereal solution of hydrogen peroxide, the ether evaporates very quickly, and the platinum or silver catalyses the dioxide. Thus pure water exists on the image, while the blank spaces are covered with unchanged hydrogen peroxide. On a negative there lies an invisible positive. By simple contact with a prepared gelatinized paper this is transferred, and may be developed by the help of different solutions which are oxidized by hydrogen peroxide, and from which metallic oxides are precipitated. For example, such a developer may be an alkaline solution of manganous chloride or sulphate, which gives a brown image of manganese dioxide, an alkaline silver solution, which gives a black image of metallic silver, or an alkaline lead solution, which gives a brown image of lead dioxide. If the gelatin paper with its dioxide image is treated with a ferrous solution, iron vitriol or ferrous ammonium sulphate, there appears a weak yellow image of basic ferric salts, which by treatment with gallic acid is transformed into a violet ink print.

Another application of hydrogen peroxide for catatypic picture production is the following: Potassium permanganate solution spread upon paper is reduced to manganese dioxide. The brown surface catalyses peroxide. If this surface is drawn on with an oxalic acid solution, the manganese dioxide is destroyed, and a drawing with white lines results. Peroxide solution spread upon this paper is destroyed except on the white lines; this image can be transferred to other paper by contact and developed as above.

A more practical application of catatypy for photographers is its use in carbon or gum printing. Silver and platinum papers suitable for weak or artificial light are easily prepared and much used, but pigment and gum prints require strong light, owing to their relatively unsensitive properties. The catatypic process is as follows: An ordinary photographic negative (necessarily not varnished) is flowed with ethereal hydrogen peroxide solution and after evaporation of the ether, brought into contact in a printing-frame with unsensitized carbon tissue or gum-pigment paper. Thirty seconds' contact is sufficient, and a positive image is formed. The image is developed with ferrous salt, the ferric salt formed tans the colloid, and the picture can be immediately developed with warm water. The necessary time to this stage is about two minutes.

SELF-DEVELOPING PLATES In a recent issue of the "Bulletin Belge," Dr. R. A. Reiss treats of the subject of emulsions containing developing agents with considerable detail. He refers to the experiments made in this direction by Petzhold, who added hydroquinone and sodium bisulphite to the emulsion. Still, he points out that certain inconveniences attend the use of plates prepared with this emulsion. Dr. Reiss has endeavored to perfect a process of this kind, and in the course of his experiments has found that nearly all the usual developing agents may be incorporated with the emulsion, provided that a preservative agent is present. After exposure, a simple bath of carbonated or caustic alkali serves for development. It must, however, be remarked that the results are very different with the various developers, and the keeping qualities of the plates are by no means uniform. Hydroquinone proved the most satisfactory developing agent to use, and acetonesulphite answered best as a preservative agent. In order to prepare such plates, a solution was made up as follows: Distilled and boiled water, 100 parts; hydroquinone, 1 part; acetonesulphite, 10 parts; ordinary plates are soaked for two minutes in this solution, and are then allowed to dry. Exposure must be about double that which would have been given to the untreated plate, and a simple solution of potassium carbonate of 3.3 per cent strength is used for development. There is a tendency to clearness in the transparent parts and vigor in the deposits which makes the treated plates excellent for reproduction and in making negatives for photo-mechanical processes. The grain of the resulting negatives is said to be extremely fine, and to resemble that of a collodion plate. Normal sensitiveness is obtained by reducing the amount of the acetonesulphite to half, but the plates so treated do not keep well and do not possess the exceptionally fine grain mentioned above.

A patent was recently granted in Germany for automatic developing plates. They were made by soaking the ordinary brand in a solution containing 100 parts of water, 10 parts edinol, and 10 parts acetonesulphite. Plates immersed in this solution and dried may be developed after exposure by simply immersing in a 25 per cent solution of potassium carbonate.

The Round Robin Guild

Conducted by Elizabeth Flint Wade

(Any amateur photographer may belong by sending in his name and address)

The Historic Picture Guild is an established fact. Since the publication, in the February PHOTO ERA, of the proposed plans, letters have been received from nearly every State, expressing interest in the work, and offering generous assistance in making it a success

It is a scientific fact that large bodies move slowly, and as The Historic Picture Guild promises to be an extremely large body, its movements, at first, will be slow. The circulars, setting forth in detail the plans of the work, will be ready for distribution this month.

However, our Guild members need not delay the work of making negatives, — this month being especially good for certain subjects for the camera, subjects which later in the season may be concealed by too heavy foliage. The only restriction in making a negative is that no print under 4 x 5 will be included in the collection. Larger prints are preferred, and these can be obtained by making, or by having made, enlargements from small negatives, provided that such negatives are sharp and full of detail. These pictures must all be well focused and well taken, as it is the facsimile of the historic locality which is desired rather than an attempt at a pretty picture.

So, members of The Historic Guild, look up your intended subjects, and if April seems to be the best month to photograph them, — then photograph them in April.

April, with its "charming motleys, half light, half shade," is the ideal month for securing those "atmospheric effects" about which we hear so much and see so little. Poets see these mists and hazes, and write about them. Photographers may see them, but they forget to photograph them.

How aptly Lowell describes the effect produced by the springing oak leaves:

> "The swellin' buds of oak
> Dim the fur hillside with a purplish smoke,"

says the observing Hosea, and if an equally observing photographer should be clever enough to seize just that time when the "purplish smoke" is at its best, he would secure the hazy, smoky look in his photograph.

If one lives in a willow locality, let him try photographing a group of pussy-willows when the catkins are in blossom, and see what a beautiful result their gray-green will produce in his photograph.

The "misty, moisty mornings" of April open up delightful possibilities in the way of atmospheric effects, — possibilities which cannot be realized at any other time of year.

So, when April buds are swelling, and April mists are rising, and April clouds are flying, put on your waterproof garments, and go forth with your camera, confident that your quest for atmospheric effects will be well rewarded.

An April storm will prove an interesting subject for a series of progressive pictures. As you know, an April storm comes up quickly, and is over almost as quickly. The sparse foliage on the trees does not obstruct the view, and with quick plates and the ability to handle the camera skilfully, the swiftly rising clouds may be photographed in all their changes. The success of these pictures depends entirely on the skill with which the amateur manipulates his camera.

Have you ever read that clever book called "The Philosophy of Unconscious Cerebration"? The author, who is a German, has evidently studied well the unconscious work of the brain, and asserts that no action can be done well that is not done unconsciously. At first this seems too broad a statement, but when we put his theory to the test, we find that he is quite right. For example, observe a beginner in instrumental music. It requires so much thought to fit the proper notes to the proper keys that both tune and time go by default. But, listen to the musician who has become master of his instrument, — does he pay attention to the keys or to the strings? Certainly not. The instrument, to him, is simply a means of expressing his own musical thoughts, or the thoughts of some master musician. So well trained is he in the use of the instrument that he manipulates it unconscious of technical detail, his whole mind being given to the finished production of the music. Does not the master of the instrument use it through "unconscious cerebration"?

Take another case: The trained sportsman uses his gun through unconscious cerebration. He has practised so well the different movements required to fire the gun, that when he sights his game his mind is not distracted from securing his prey by any thought of the management of his weapon.

Not until the amateur photographer is sufficient master of his camera to use it by "unconscious cerebration" will he be able to make successful snap-shots, or, indeed, will he be sure of making a success of any picture.

So expert in the use of a camera should one become that his whole mind can be concentrated on his subject, and only unconscious thought go into his camera. To drill himself thoroughly in the use of the camera is one of the best things for a beginner to do, until such time in which he can use it without having to direct special thought to it; for, unless he learns to use it in this way, he will not be able to take advantage of photographic situations which require instantaneous action.

In drilling with a camera, the different movements always should be made in the same order. These should be determined upon, and not changed. The following order will be found to comprise the usual movements necessary in both plate and film cameras:

PLATE CAMERA

1. Adjust diaphragm.
2. Focus the distance by scale.
3. Remove plate-holder slide.
4. Set the shutter.
5. Locate object in the finder.
6. Press button to release shutter.
7. Place slide again in holder.

FILM CAMERA

1. Adjust diaphragm.
2. Focus for distance.
3. Set the shutter.
4. Locate object in the finder.
5. Press the release button of shutter.
6. Turn reel for next exposure.

A few words in regard to the different movements may be of service to the beginner, and may not come amiss to the more advanced amateur.

It will be noticed that the first movement designated is the adjustment of the diaphragm. This is one of the most important points in the use of a camera, and one should know always what size stop he is using. For a rather bright morning, use the largest stop. At midday, use a small stop. Suggestions on the proper stops to use on certain occasions have been given in a recent number, so we shall not repeat them here.

The next movement suggested is the focusing of the distance. In snap-shot work there is no way of focusing, except by turning the screw of the focusing scale until it marks the approximate distance of the amateur from the object to be photographed. The guessing or judging of the distance is something that can be learned only by practice. Estimate a certain distance; then pace it off, and see how nearly right you were in your estimate. A "pace" is the measure from the heel of one foot to the toe of the other, as the person strides forward. This measure is calculated to be a yard, or three feet; so, three paces would be three yards, or nine feet. It may require some practice before one can make accurate estimates, but when the eye is once trained, it remains trained.

To mention the removal of the plate-holder slide may seem superfluous, but this is something that is often forgotten; so when drilling, use an empty plate-holder, and remove the slide at the proper time.

The setting of the shutter comes next, and then the camera is ready for the exposure.

The next movement is to locate the object in the finder. If the object be a moving one, — the word "moving" here implying motion, and not emotion, — turn the camera until the object is in the proper place on the plate, and press the release button. This is the sixth movement. After the exposure, the slide is replaced, and another plate adjusted for the next picture.

In the Film Camera drill, do not neglect to turn on the reel as soon as the exposure is made.

It will be noticed, perhaps, that in this drill nothing was said about the bulb shutter. This is the reason: When one is out making snap-shot work, the bulb and rubber tubing are in the way, so I always advise the amateur to take them off, and to use the release button instead. If one prefers to make use of the bulb then in the drill, substitute "Bulb pressure" for button release.

To the amateur who will profit by these hints, and will learn to use his camera by "unconscious cerebration," the assurance is given that he will have the pleasure of producing very creditable work.

Do you want to try a developer that will do almost anything except to produce a picture on an unexposed plate? Then let me recommend Metol-potash. One can obtain more "kinds" of negatives with this developer than with any other known combination. It is a chemical concoction to juggle with, to experiment with, and to surprise one's self with. The active ingredients are metol and carbonate of potash. The metol solution is made up of 16 ounces of water, 1 1-2 ounces sulphite of soda crystals, and 70 grains of metol. The potash solution is made up of 3-4 of an ounce of carbonate of potash dissolved in 8 ounces of water. To use for ordinary negative, take 3 ounces of the metol solution to 1 ounce of the potash solution. Prolong the development until the image has nearly or quite faded away. If taken out of the developer too soon, the image will not be dense enough. If a sharp negative with good contrasts be desired, add half an ounce more of the potash to the solution. If you want a negative soft with delicate shadows and beautiful half-tones, then use half an ounce of the potash solution to three ounces of the metol solution. By varying the quantity of potash used, one can get any kind of negative desired.

Metol acts differently from almost any other developing agent. It is a very rapid developer in bringing out the detail quickly. The whole image comes up almost at once, leading the amateur who never has used it before, to think that his plate is flashing up from overexposure. While the image comes up fast, it requires time to gain density,— about three minutes from the first appearance of the image. Metol, usually, is combined with some other developing agent. With hydrochinon, its action is almost identical with pyro. When used in combination with pyro, it retards the action of the pyro, and allows great latitude of development.

ANSWERS TO CORRESPONDENTS

H. W. Noyes.— You may send on your "Snow Scenes," as the announcement has been put over to the May number, owing to the mistake in setting the date. Portland, as you suggest, would be the more desirable city for the storing of the Maine collection of historic pictures. We shall be very glad of your assistance, and you have been enrolled as a charter member of the Guild. Circulars and special membership card will be sent you very soon.

George K. Bosworth.— In this number you will find notes in regard to size of negatives for the Historic Pictures. We shall be glad of your help.

Miss M. P. Sawyer.— A special charter membership card will be mailed you soon, together with circular giving full particulars in regard to the Guild.

G. Frank Radway.— Your locality is particularly rich in historic places, and we shall enroll you gladly as a charter member.

Mr. C. D. Hotchkiss.— We trust that we may have duplicates of the pictures in your fine historical album belonging to your Historical Society. A charter membership card and circulars will be mailed you at an early date.

W. H. Porterfield.— Tickets of membership and circulars giving full details of Guild work, will be sent you and your friend soon as circulars are ready for distribution.

Clara M.— The red spots on your aristo platino prints may be removed by rubbing them gently with a bit of surgeon's cotton dipped in a weak solution of muriatic acid.

E. D. J.— Yes; you will find it cheaper to buy the chemicals separately and mix your own developer. I do not approve of pyro as a developer to be used by young people. It is very poisonous, and there is no known antidote.

K. Embry.— The crackled look in your negative, and which appears in the print as a fine network, is due to the plate not being rocked during development. When the developer is first turned over the plate, the tray should be kept moving constantly.

Ellen M. W.— Papers suitable for mounting prints may be obtained at the Photo Era office. It is not necessary to use an acid bath, except in very warm weather when there is danger of plates frilling. A "thimble" plate-lifter costs fifteen cents.

W. L. B.— The formula, given in the July, 1902, Photo Era, for blue transparencies will be found to answer equally well for coating paper for blue-prints. It gives a brilliant blue and clear high lights, and no muddy shadows. It is not necessary to size or salt Whatman's drawing-paper before applying the blue-print solution.

Morris K.— If the yellow stain on your negative is produced by too much alkali in the developer it may be removed by soaking the plate in a solution made of five ounces of water, one ounce of citric acid, and one half ounce of alum. The plate must be well washed from hypo.

Ella Hendy.— A weak solution of gum dammar, dissolved in turpentine, makes a good retouching varnish. Take a little on a bit of surgeon's cotton or on the end of the finger and rub it on the places to be retouched. It requires just a thin coating of the varnish to give "tooth" to the surface of the film so that it takes the pencil well.

B. J. L.— Transparencies are made in the same way as lantern slides. The printing is by contact, and the plate is developed in a rather slow developer and one which will bring out good contrast. Metol hydroquinon is an excellent developer for transparencies, as it gives such excellent detail in the shadows.

Bertrand S.— It is not necessary to varnish negatives if one is careful in handling and storing them. The best medium for enclosing negatives is the commercial envelope, which may be bought for 4 x 5 plates as low as fifteen cents per hundred.

B. M. H.— Yes; by all means use non-halation plates in photographing interiors where there are many windows. They are not necessary when making interiors where windows do not come within the field of the lens. The exposure with non-halation plates must be twice as long as when the ordinary plate is used.

P. M. R.— The glycerin solution for flattening bromide prints may be used with equal success with Velox. Velox prints will usually remain flat if after they are dry they are straightened over the sharp edge of a drawer.

Notes and News

DES MOINES, IOWA The Photographers Association of Iowa will hold its Thirteenth Annual Convention at Des Moines, Iowa, May 19 to 22, inclusive. Secretary Townsend, of Muscatine, announces that it will be a no-prize convention, but a beautiful engraved certificate of rating will be given. The diploma is of sufficient excellency to be accepted and hung in the art gallery.

HARRISBURG, PA. The Second Annual Convention of the Photographers Association of Pennsylvania, West Virginia, Maryland, and Delaware will be held at Harrisburg, Pa., May 26 to 29, inclusive. Gold, silver, and bronze medals will be awarded in the several classes, and a special prize of a silver loving cup, donated by Mr. W. F. Slater, of Philadelphia. The officers of this convention are: T. B. Clark, president, Indiana, Pa.; E. W. Brown, secretary, Beaver, Pa.; W. I. Goldman, treasurer, Reading, Pa.; J. E. Giffin, first vice-president, Wheeling, W. Va.; John Betz, Jr., second vice-president, 417 N. Washington street, Baltimore, Md.

LINCOLN, NEBRASKA The Fourteenth Annual Convention of the Nebraska Photographers Association will be held at Lincoln, Neb., May 13 to 15 inclusive. Address all communications to E. R. Tyson, Nebraska City, Neb.

TAUNTON, MASS. The Camera Club of this city have started a movement to secure from the photographers in this vicinity as many permanent prints of local views of historical interest as it is possible to obtain. It is proposed that this collection be glazed and framed neatly, cheaply, and durably as can be done, and all offered to the Historical Society for such purposes as its members may deem to be wise.

HAMILTON, ONT. The annual exhibition of the Camera Club of this city was held March 28–30 inclusive, in the Museum of the Hamilton Association. A. G. Alexander wins the first trophy with gold medal for best collection of pictures, and C. F. Hunt, the second trophy with silver medal. Mrs. Robert Campbell receives a silver medal for best pictures by the lady members, J. Gadsby silver medal for best pictures of flowers, Walter Hill silver medal for best landscape pictures, and D. A. Souter silver medal for best figure study work.

COLUMBUS, OHIO The Columbus, Ohio, Camera Club opened new headquarters April 1. The first general exhibit will consist of the Photo Era pictures, loaned them for the purpose by the Photo Era.

BOSTON, MASS. The Boston Camera Club showed, during the last days of March, a collection of pictures by Mrs. T. H. Cabot that attracted considerable attention locally. The pictures were largely portraits, and showed the skill and good taste of the artist to excellent advantage.

PORTLAND, ME. The Portland Camera Club will shortly occupy the rooms just fitted up in Congress Street of that city. It includes a large dark room, a parlor for exhibition purposes, and a studio with a large side light for photographic work.

DENVER, COL. The fourth annual salon of the Colorado Camera Club was held at their new quarters in the Appel building of that city, beginning March 25. One hundred and seventy-six pictures were hung. The group includes the loan of the Photo Secessionist Club of New York.

INDIANAPOLIS, IND. We have received the following from George G. Holloway, secretary of Photographers' Association of America:

The National Convention will be held at Indianapolis, Ind., Aug. 4, 5, 6, and 7, in das Deutsche Haus.

DAS DEUTSCHE HAUS.

Many good things have been prepared for your benefit, and the leading lights of the profession will exhibit the finest work they ever made.

Send in some of your work, that we may see the progress you have made during the last year.

You will be surprised at the enormity of the exhibition this year. Every foot of floor space has been taken by the Manufacturers & Dealers, who are going to make the finest displays, in their respective lines, ever shown at a National Convention.

We want you to see how the Hoosiers do things, and we are going to treat you royally.

Remember, that the Photographer, Manufacturer, or Dealer who is not represented at the big National Convention this year announces to the world that he is not keeping Pace with the Times.

Are you keeping the Pace?

Those promises you made about sending in an exhibit should be kept, and don't forget that one promise fulfilled is better than a thousand broken ones. So get in line and help to keep the Pace.

Fraternally yours,

GEORGE G. HOLLOWAY,
Secretary P. A. of A.,
Terre Haute, Ind.

ROCHESTER, N. Y. The Quarter Century Photographic Competition, which is being conducted by the Bausch & Lomb Optical Company, and which closes Oct. 1 next, is attracting unusual attention among American photographers, from the fact that it is the only competition in recent times in which the merits of American photographic lenses have been tested, and it will be an extremely interesting epoch in the development of American photography as showing the results of the last quarter century's work in an industry which has heretofore been essentially European. Judging from the exhibits which have already been handed in, although the competition is not to close for eight months yet, there will be no cause for the users of American lenses to regret their choice.

BOSTON, MASS. During the past year the photographers of Boston and vicinity have enjoyed the privilege of listening to many well-known artists, who have addressed them at the Lens and Brush Club. Of these no one is more pleasantly remembered than Mr. John J. Enneking. Being one of the most prominent landscape painters in the country, he combines his well-grounded knowledge of all principles and wide experience with the ability to impart that knowledge in a pleasing and forceful manner, and his talks have been greatly appreciated by the photographers. Mr. Enneking has planned to close his studio shortly and spend the summer in Europe. He will hold an exhibition of all his work at the Beacon Galleries, 31 Beacon street, from April 6th to the 20th, after which it will be sold at auction.

This ought to be of special interest to the photographers, and it would be a graceful acknowledgment of the interest Mr. Enneking has manifested in them, if they would advertise the exhibition among their friends and do all in their power to make it a success.

Those who have noticed Lloyd & Co.'s Thornton Pickard advertisements will be interested to know that this firm sends a member abroad every year to visit the great European lens makers, the shutter people, the camera manufacturers, and other connections. This year Mr. Lloyd and Mr. John W. Collinson are the firm's representatives. To Mr. Collinson it will be like an Old Home Week, as he is English born and bred, and has had the great advantage of working in all the great English Optical factories since his youth. He has served with Ross, Dallmeyer, Beck, Taylor, Taylor & Hobson, and was one of the most expert photographic and astronomical lens makers in the United Kingdom. There is no part of the lens that Mr. Collinson has not done expert work on, and when he came to the United States, twelve years ago, he brought with him a thorough practical knowledge of photographic objectives that is rarely found — certainly not in the ordinary optical house.

We shall be surprised if his present visit does not result in some useful additions to his firm's stock, which will not be commonly found.

DUBLIN, IRELAND The regular annual exhibition of the Photographic Society of Ireland, was held in Dublin, March 23 to 28. The judges were Sir Walter Armstrong, James Brenan, A. Horsley Hinton, Prof. J. Joby, and Alfred Werner. Gold, silver, and bronze medals were awarded.

PARIS, FRANCE The Salon of the Paris Photo Club is announced for the 1st of May, and will continue for one month. Entry forms may be obtained from the secretary of the Photo Club, 44 Rue des Mathurins, Paris.

ST. PETERSBURG, RUSSIA An important exhibition of pictorial photography was held in St. Petersburg, Russia, under the patronage of the Grand Duke Michael and the Photographic Society of that city, opening on April 20. The collection of English pictures shown was largely made up of those shown recently at Turin in Italy.

OHIO-MICHIGAN PHOTOGRAPHERS' ASSOCIATION

The Executive Committee of the Ohio-Michigan Photographers' Association met at Toledo, Jan. 28, and decided on July 22, 23, and 24 as the date of their next convention, to be held at Saginaw, Mich.

The following rules were adopted to govern the exhibition of pictures: —

First: Exhibits may consist of one or a dozen pictures, any size, framed, or unframed.

Second: The Association will not be responsible for any loss or damage, but special precaution will be taken to ensure the safe return of all pictures submitted for exhibition.

Third: All pictures must be sent so that they may be judged by the hanging committee on the 21st of July. As provided by resolution, all pictures shall be judged by a committee of three artists and three photographers, with the president as chairman. It will be necessary for all photographers to send their pictures a few days in advance of the convention, so that they may be there on time for this hanging committee to make their selections.

Fourth: All pictures must be sent to Frank R. Bill, care of Masonic Temple, Saginaw, Mich., carriage prepaid, and delivered not later than July 20, 1903.

Fifth: Exhibits for manufacturers and dealers shall be sent in care of the secretary, F. W. Wolf, Saginaw, Mich., care of Masonic Temple. All charges prepaid, and must be placed in position on or before the opening of the convention.

Sixth: All boxes and packages will be accepted at any time before July 22, so that exhibitors need have no concern for the safety of their goods. No exhibit will be allowed to be removed before the close of the convention.

Seventh: No manufacturer or dealer shall be permitted to do business on the hall floor, unless he first secures space or desk room, and he shall, in addition, pay the entrance fee of two dollars ($2.00).

Dues must be paid to D. D. Spellman, treasurer, Detroit, Mich.

Membership fees, $3.00. Annual dues, $2.00.

A. L. Bowersox, Pres, Dayton, O.
F. W. Wolf, Sec'y, 1008 Pearl St., Cleveland O.

CAMBRIDGE, MASS. The Harvard Camera Club has elected the following officers for the ensuing year: M. D. Miller, 2M., president; E. Sohier Bryant, '06, vice-president; M. S. Watts, '05, secretary and treasurer; G. W. Outerbridge, '05, corresponding secretary; and W. C. Lane, F. L. Olmstead, '94, and J. B. Stetson, '06, members of the executive committee. In the latter part of April will be held the Second Photographic Exhibit with the Camera Club of the University of Pennsylvania. The pictures will be shown for about ten days at each university.

SAN FRANCISCO, CAL. The Third San Francisco Photographic Salon will be held in October, 1903.

In order to encourage liberal contributions from pictorial photographers at home and abroad, and to save the expense of framing pictures that may not be accepted, as well as the greater expense of transportation, pictures suitably mounted or matted will be received from contributors in the United States, and such as are accepted by the Jury of Selection will be glazed by the Salon Executive Committee at the exhibitor's expense. The Executive Committee are: A. L. Coombs, chairman; W. E. Palmer, C. A. Goe, G. G. Eisen, W. J. Street, J. W. Erwin, R. H. Fletcher. Address communications to Third San Francisco Photographic Salon, 819 Market street, Room 58, San Francisco, Cal.

READING, PENN. The second photographic exhibition of the Reading, Penn., Lantern Club will be held at the club-rooms, in that city, from May 4 to 9, 1903. Pictures to be submitted should be in Reading not later than April 25. Address all communications to Fred E. Haas, 152 Buttonwood St., Reading, Penn.

CHICAGO, ILL. John F. Byrnes & Co., Chicago photographers, have secured the concession for the exclusive "photographic rights" at the St. Louis exposition. The concession is said to be worth $200,000.

MILFORD, N. H. The following have been elected as officers of the Milford Camera Club: President, Willis H. Parker; vice-president, Geo. M. Follett; secretary, Geo. Baker; treasurer, L. C. Hall; executive committee, E. Armstrong, G. M. McIntire, and L. M. Hall.

PUEBLO, COL. An enthusiastic meeting of camera workers was recently held at 17 Opera House Block, and the organization of a camera club effected. The following were elected officers: President, Herman W. Nash; vice-president, F. C. Rogers; secretary, A. F. Hummel.

ELMIRA, N. Y. The Elmira Camera Club held its first annual meeting for election of officers recently in Van Aken's studio. The following were elected to hold office for the ensuing year: President, Dr. A. B. Mitchell; vice-president, W. A. Pease; recording secretary, W. H. Arnold; corresponding secretary, Charles van Aken; treasurer, L. L. Ennis; and three directors, T. C. Fraley, H. L. Walker, and J. R. Hall.

CHATTANOOGA, TENN. The Third Annual Convention of the Photographers Association of Kentucky and Tennessee will be held at the Auditorium in this city, from June 16 to 19 inclusive. The officers are as follows: President, W. G. McFadden, Paducah, Ky.; first vice president, A. W. Judd, Chattanooga, Tenn.; second vice-president, F. J. Spengler, Lexington, Ky.; secretary, J. L. Cusick, Louisville, Ky.; treasurer, W. S. Lively, McMinnville, Tenn.

Medals and diplomas are among the awards to be made, and the grand prize is known as the Gatchell grand prize cup, to be given for the best set of pictures of eight inches or larger. We learn from the Sec. J. L. Cusick, of Louisville, that it promises to be the most successful convention in the history of the Association.

BROOKLYN, N. Y. The Brooklyn Camera Club has just elected the following officers at its regular March meeting. Edwin O. Torbohm, president; George D. Klippel, vice-president; U. G. Dodson, secretary; John Abrams, assistant secretary; Louis Drypolcher, librarian; Wm. H. Davies, treasurer; Andrew Switzer, financial secretary; Wallace Tiebout and George Orthel, directors.

An interesting lecture on Flash-light Portraiture was given by Mr. Wm. T. Rich, at the club rooms, 776 Manhattan Ave., on April 1.

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APRIL

Winds are growing sweeter
  Day by day;
Spring is here, the fields have seen her,
And are growing greener, greener,
And the woods have found so much
In the magic of her touch,
That the golden mist of April
  Deepens with the May.

—Goodale.

It is a delight to get close to the great throbbing heart of nature this month and drink in abundantly the sweet influences that fill this wonderful April world.

In sheltered nooks, the hyacinths and tulips, sweet violets and anemones already lift their gentle faces to the sun, and the same sweet odors, grace, and colors greet our senses as of yore. Ever and anon

> "The hooded clouds, like friars,
> Tell their beads in drops of rain."

While the dripping sunshine and moisture together fill the air with fragrance and life, you had better give way before the charm of this picture and let its beauty caress your soul.

You who have the real love of nature in your heart, take your camera out into the open fields or by the sea. And if your soul be in tune you will catch a glimpse of Spring's white shoulders through the woodland openings, and hear a strain of her tinkling laughter. Your plates will show the sweep of the clouds across the April sky, the play of the waves along the shore, the trees bending beneath the breeze, and the sunlight shimmering over the stretching meadowlands and winding streams, and they will all be full of divine suggestion. The illusive, intangible, and subtle qualities in your negatives are the shadowy boundaries that separate the visible from the invisible world. They can be produced only when the imagination is stirred by the beauty of things round about you — and they can be imitated only with something of the Master's penetration into the heart of nature.

Corot Corot used to say that "art is a matter of the soul. Things you see and know all about are not worth painting; only the intangible is splendid."

The great French artist looked for beauty and found it in nature. He painted what he saw, it is true, but he saw things with a clearer vision than other men saw them, because he was made of finer clay than they were — and he could dream dreams their dull imaginations never could conceive of. There are sounds so subtle that our coarse, dull senses never recognize them, and there are delicate lights and shades, tints, and colors that the uneducated eye cannot detect. The veil that hides these manifestations of beauty and truth from the ordinary mortal was withdrawn for Corot, and he saw and did things born of the spirit. Instead of portraying every detail of leaf and blade of grass and dewdrop, he gave the effect of leaf and blade of grass and dewdrop in his pictures, without painting them at all. His pictures, therefore, were beyond skill of hand. They represented a subtle, spiritual quality, beyond the mere knowledge of technique,— what the world has since recognized and called by common consent, Art.

Rembrandt But the great Flemish painter, Rembrandt van Rijn, whose life was spent in mastering the science of light and shade, was and is, perhaps, to-day, the most interesting artist for photographers to study. He did not care for color effects in the sense that the French and Italian masters did, but rather for the proper distribution of masses of light in his pictures. Even in his most richly colored paintings the general effect is that of a photograph, or, strictly speaking, a study in light and shade. After seeing his love for these beautiful contrasts, one cannot but notice and enjoy more keenly the exquisite effects of light and shade even in the most commonplace surroundings. The proper arrangement of high lights and deep shadows is the most important part of any artistic photograph. A study of Rembrandt's work will show what wonderful effects can be obtained with one model in many positions, with different arrangements of light. It cannot fail to be of great assistance to any photographer who loves beauty and seeks to reproduce it in his pictures.

National Historic Picture Guild The call sent out by the Photo Era, in February, for the establishment of a National Historic Picture Guild has met with a very flattering response. A large number of subscribers and readers from all over the country have sent in their names to be enrolled on the charter list. The great roster will soon be complete, and as soon as the organization takes definite shape, the work of embodying, in permanent photographic form, scenes and places characteristic of our country, its people, and its every-day life will be systematically begun. We receive daily a large number of encouraging letters which express appreciation of the work that is being done by the Photo Era to establish the Guild. While these assurances are most gratifying, we feel confident that there are many others throughout the country who have the same kindly feeling toward the work and who have not yet written to offer suggestions or to join the Guild. To all such we say there is no small need of help in this direction. A few hints as to how best to perfect the work of organization would be greatly appreciated. First of all, we want new members. It is not very difficult when talking photography at the club or with a brother photographer to mention the Guild. It is a lesson in patriotism for which he will be grateful. Furthermore, "one tripod slave is always sympathizing with another." There is a bond of fellowship in photography that makes an ordinary introduction unnecessary. A few words, judiciously dropped at the right moment, may result in creating a future camera historian.

We hope shortly to have a good supply of literature upon the subject which we will gladly furnish on request. Meanwhile, should you find a victim near and not have the circulars at hand, request his address that you may have the Secretary of the Guild forward him the necessary papers at once. As stated above, we will cheerfully furnish information upon request,—and you will be helping along a great work that posterity will one day bless you for.

Photography and Schools Perhaps one of the most impressive facts in educational work to-day is the widening scope of popular instruction. An eminent English educator who has recently been studying the American system of education declares that four things greatly impressed him.

1. The earnest belief, everywhere strikingly in evidence, that Americans believe heart and soul in education and the American school was radiant with the belief in its mission.

2. That for work of the earliest grades the harshest critic could give little else than praise. In the first four years of school life the child is stimulated to self-expression and self-realization by teachers skilful in their art and unwearied in their practice of it.

3. That teachers were endeavoring to tear out the non-essentials. They had a tendency to employ labor-saving appliances in education and to avoid to the utmost the waste of precious time.

4. That modern industry and business demanded the highest education, both technical and university training being indispensable, for successful competition. In conclusion, his judgment on this subject of education is said to be as highly regarded as that of any man living.

We submit that the adoption of photography as an educational appliance would be the crowning feature of the American school system. No other single influence that could be invoked would be fraught with so many blessings to both the teacher and pupil. Speed the day when the camera will become as necessary a part to every school outfit as the spelling-book or the blackboard!

Sinews of War In connection with the establishment of the National Historic Picture Guild throughout the country, the question of an endowment has been suggested. No great public work can be long carried on successfully without an adequate supply of the sinews of war. Witness the equipment of such an institution as the Rockefeller Institute of Medical Research at the Johns Hopkins University in Baltimore; the endowment of men to carry on research in many fields of work by the Carnegie Institution; the recent public announcement of the gift of a million dollars to Barnard College; all these generous gifts have been made with a view to carrying on successfully a work in the interest of the public. A substantial endowment would undoubtedly make the Historic Picture Guild an assured success from the start. And we are led to inquire who will be the generous donor to first connect his name as founder, of this great public movement, by furnishing it with the sinews of war?

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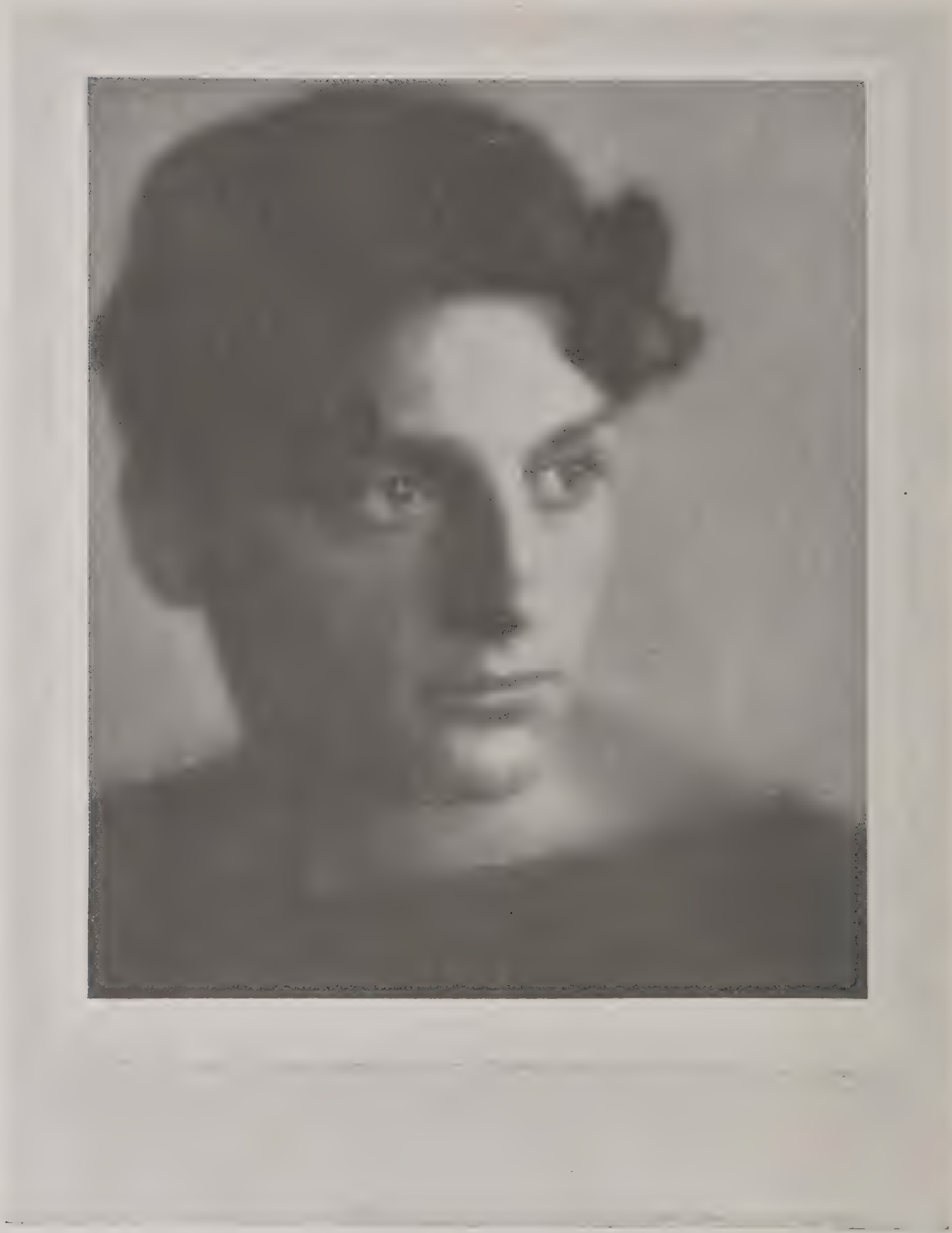
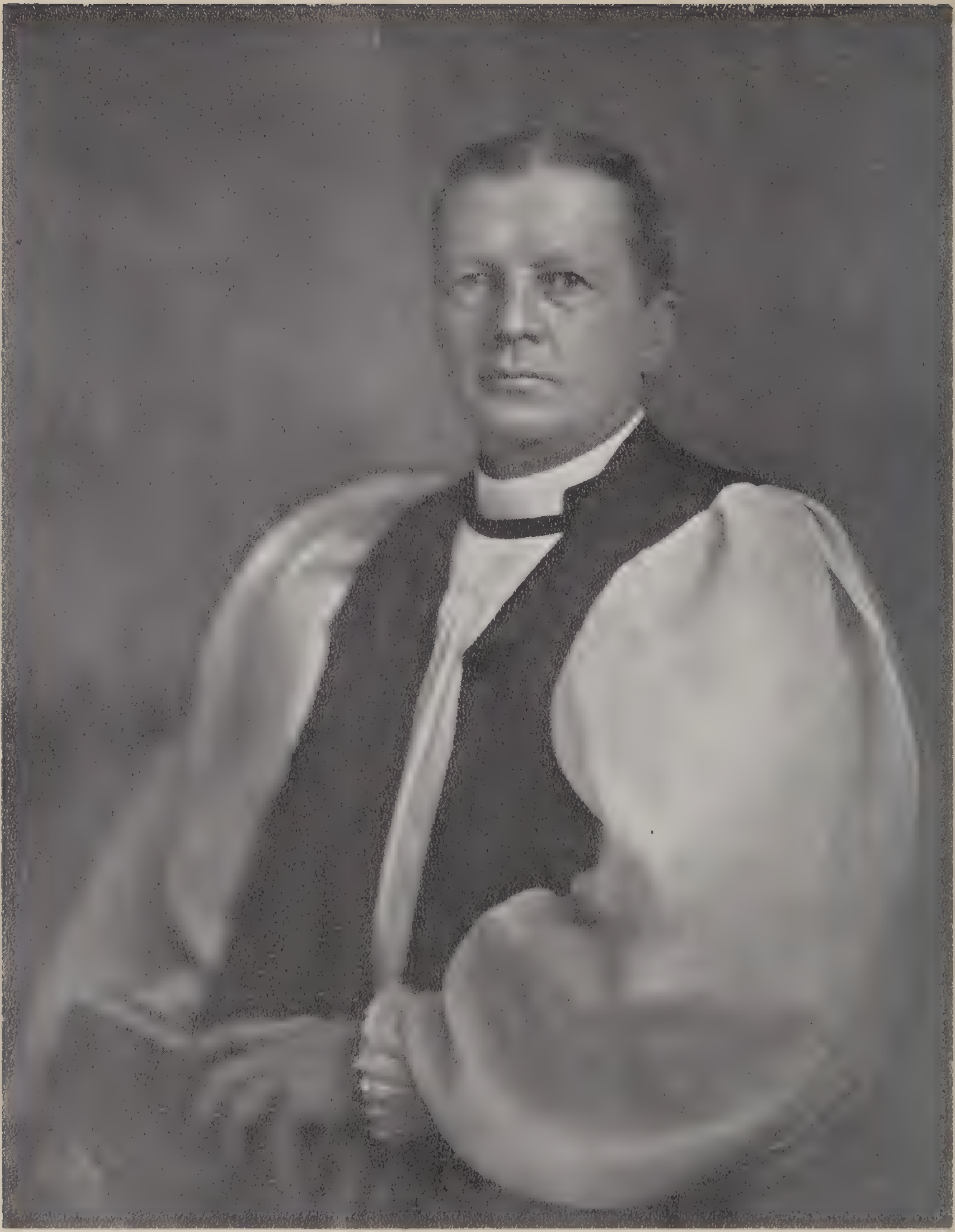


ACHILLES
BY F HOLLAND DAY

PHOTO ERA



PORTRAIT OF BISHOP LAWRENCE
By GARO

PHOTO
ERA

PH

PHOTO ERA

The American Journal of Photography

Volume X MAY, 1903 Number 5

Art in Portraiture

THOS. HARRISON CUMMINGS

IT has often been stated, with some degree of truth, that the same problems that meet the painter also confront the photographer. Composition, balance, drawing, color, are all as essential to artistic success in photography as they are in painting.

When a photographer begins with the first touch to bring his model into pose, when he selects his view-point and turns a fold of drapery, he has taken the first step towards artistic achievement, and the spirit of art is stirring within him. The merciless severity of his lens, plates, and chemicals is no hindrance, in photography, to the hand of a master. For, like the painter, he substitutes breadth for detail and subdued effects for sharp outline, softens his light and shade, when necessary, and the limitations of his tools and process are as nothing if the spirit of art has come to him. Invention, design, feeling, imagination, all coalesce in the finished result, as in a painting, and the picture is lifted out of the range of photography into the realm of art. For this reason, if for no other, a painter's opinion is sometimes useful even to determine photographic values.

In artistic portraiture, the subject of this article, we know of nothing of greater value to a photographer (who might do worse than paste it in his hat as a constant reminder) than the advice given by the famous portrait-painter, Von Lembach. The one great dominant principle in his portraits was that "out of nature one should always grasp and hold fast but one thing in portraiture — the HEAD. That this exponent of the soul must stand out in undisturbed unity; that accessories of whatever kind, whether of dress or of form, must distract and weaken the impression that the head should produce; that a portrait, to attain its aim and significance, must look out from a background of nothingness and must be shorn of every detail that interferes with this unity of purpose."

To illustrate the application of this principle in photographic portraiture we have selected six pictures from the fine collection of the Garo Studio, in Boston, for reproduction in this number. These pictures all show an unusual breadth and largeness of effect for photographs. But what they are specially remarkable for is the strength and definition given the central point of interest in each — the HEAD. There is no weakening the unity by the crowding in here of accessories which would surely divide the attention. In making these portraits, we feel that the artist has been fortunate in depicting character, and has stopped at the right point where any further detail was unnecessary to strengthen his picture. Where art has to do with character the simplest statement is always the strongest. And so the portraits that strike us the most forcibly, in exhibitions, are, as a rule, those conceived in simplicity and vested with a personality that stops and holds us. The pictures of both Bishop Lawrence and Joseph Jefferson, in this issue, abundantly show this. Their features are bounded by shadows, and the expression of character in both is achieved by the massing of blacks and whites. This does not mean, however, that there should be complete obliteration of detail to express character in portraiture; for, among the illustrations of this issue, in the "Portrait of Miss Chase," there are certain large lines of drapery which the very character of the subject demands. Here, too, the quality of breadth is secured, in the portrait, by a graded light which proceeds gradually from deep shadow to high light, lending variety and simplicity to the whole — a sort of chiaroscuro effect that is very pleasing. We have heard Wilbur Dean Hamilton, the artist, declare, before the Lens and Brush Club, of Boston, in criticizing this picture, that because of this effective rendering of light shadow and half-tones it was the finest photograph that he had ever seen. This opinion was endorsed by many of the leading photographers of New England who were present.

Meanwhile, back of these beautiful portraits, stands the refined personality of the artist. For, a strong portraitist must, of necessity, be a man of fine grain, since his refinement is the mirror in which his sitter is reflected.

"Back of the canvas that throbs, the painter is hinted and hidden;
Into the statue that breathes, the soul of the sculptor is bidden.

. . . .

Crowning the glory revealed is the glory that crowns the revealing.
Back of the sound broods the silence, back of the gift stands the giving.
Great are the symbols of being, but that which is symboled is greater."

John Garo is a fine example of that singleness of purpose and devotion to his calling that characterizes the born artist. When he began his professional career, sixteen years ago, as an operator in a studio, in Worcester, Mass., he was a mere boy — a stranger in a strange land, among a strange people, speaking a strange tongue. But then, as now, his chosen art was the all-absorbing interest of his life. He had a temperament of rare vitality and sincerity, and added to all this was the most precious of all gifts, the artistic nature. Toiling by day and attending art school at night, he soon began to reveal a growing mastery over the materials of his art. There are some photographers who, though possessed of a thorough mastery over the materials of their art, are, nevertheless, lacking in spirit, and never rise above the dead level of their profession. There are others who seem to be more impressed with the dignity of their vocation. They have the spirit to do something better and they rise. They work because the spirit is in them and they show to others in their work the beauty that has awakened their own admiration. Garo belongs to this latter class. Later on, he came to Boston, and after some years spent in acquiring experience and reputation in some of the larger studios of the city, his ability began to be recognized. In March, 1902, he was able to open, on Boylston street, in one of the most exclusive sections of the city, the largest and most finely equipped photographic studio in all New England. The best people of the city are now numbered among his steadily increasing clientage, and his brother photographers are all rejoicing in the well-merited success that has come to him at last.

And when they come to analyze this success there is a lesson in character and art education enough and to spare for them all. "First learn technique, then try picture-making," is the constant cry at photographic conventions. But, while technique is easily learned, picture-making is seldom mastered, yet this is the key-note to success in professional photography to-day. When the knowledge of technique is strongest in a man, it fetters the idealistic side of his nature. But when his knowledge and enthusiasm for art is greatest, he will make artistic pictures that are sure to sell. This will, perhaps, explain in part, why those photographers with some art training come quickly to the front, in these days, and pass others who have been long years in the profession.

As a matter of fact, the term technique in photography is not always rightly understood. It should mean simply just enough of mechanical manipulation in the photograph to attain rightly the object in view. "Beyond this," says a contemporary, "when it becomes too obtrusive, it mars the beauty of the structure as scaffolding does a completed building. It destroys all flight of the imagination — loftiness of inspiration, and pleasure in the completed result. There is no art in portraiture where technique predominates." Pictorial values are relegated to the background when a photographer is more sensitive to technique than to beauty in his pictures.

And it is the glory of Garo, that while his pictures are all technically good, they are strongly idealized as well, and they form excellent examples of artistic portraiture, by photography.

Smiles and Tears of a Country Photographer

E. E. EVANS

THERE is no place, I think, unless it be a lawyer's or doctor's office, perhaps, where one sees more of all sides of human nature than in a photograph gallery. From the oldest residents to the youngest; good, bad, and indifferent; handsome people and ugly ones — most hopelessly ugly, sometimes; honest people and — well, the other kind. What a galaxy of character studies any photographer may store up!

But the most numerous of all is the fiend who expects to "break the machine." After the photographer has listened to that would-be witticism five thousand times or so, he can laugh mechanically whenever it is sprung on him; but it's the getting used to it! No wonder my hair is gray before its time. On rare occasions I "get even" by answering sweetly, "O! my machine is warranted to stand *anything*"; but one must measure his subject pretty accurately before venturing to use such a shot.

One meets the *vain* girl, who openly craves admiration and will swallow any amount of flattery. She comes in to see her proofs, and after looking them over turns to you with "*Do* you think they are good?" "Don't you think this is the best?" "*This* one is perfectly beautiful, don't you think?" etc. If you are wise you "think so too," and each of the others contains some feature to be particularly praised, and the chances are that she will order from each of them,— perhaps a dozen of each, when she only intended to take one dozen at first. Just as she is going out she says, as an afterthought:

"Now, if you don't think they are good when finished, you really must not put any of them out in the show-case. I leave it to your judgment"; and any photographer of average intelligence would know that it means she would be mortally offended if her picture were not given a prominent place in the street show-case the moment it was finished.

By the way, men are just as vain as women; more so, on an average, I believe, and I know they are more easily flattered. But when it comes to flattery, who so susceptible as the proud parents of a pretty baby? No class of people, according to my observation.

I could fill pages with the eccentricities of the fussy old lady whose children want a picture of her to look "just as she always did," though perhaps they have not seen her for twenty years. One of them insisted that I should take a book as part payment. She was agent for it, and if I would not patronize her she would go to some other photographer. I tried to explain that it was on a subject which interested me not in the least; but she said it would do me good to read it, and almost told me I ought to be ashamed of myself that I had not done so before. I took the book and the order, and beside making enough to more than pay "expenses," I succeeded in making such a flattering picture of the old lady that she and her relatives have been friends of mine ever since.

Then there is the public man who suddenly decides that he must have his picture taken, as it is to appear in half a dozen daily papers to-morrow. He comes to see you, and if you are ignorant, as I once was, you tell him you cannot possibly finish them in time. After you have read this, however, you will go about it as though it were an every-day occurrence, first explaining that, though you cannot make "finished" pictures on such short notice, you can make up some which will be quite as satisfactory for half-toning.

You make the sittings — two are usually safer than one — and tell the gentleman to call in an hour for the proofs. Then develop the negatives, and wash by hand. Hold between the fingers and thumb, film down, and "splash" into water — one hundred times is quite sufficient for washing any negative. Set in a rack in an airy or sunny place, and as soon as it stops dripping wipe off with a bit of cotton dampened with alcohol, which greatly hastens the drying.

Proof as soon as possible; retouch as much as is necessary; make the requisite number of prints — rather dark *proofs;* wash them and *fix.*

Wash them again, and mount on thin cards or Bristol board; dry in the sun or by artificial heat, and the deed is done.

I am supposing that you have time to devote your whole attention to it, and the sun is shining, but one could use one of the papers which print by artificial light on a dark day — anything to "save the order," for there's money in such rush order work, if you charge accordingly.

Sometimes we meet a man whose cross eyes must not "show." The etching tool will often remedy such defects, but the use of it is risky, especially about the eyes, unless one is an expert. Often careful and judicious posing is all that is necessary, but when such posing effaces the only good feature in the face — well! the case is well-nigh hopeless. With the latter class of subjects I have found it safest to make two or three sittings, as different as possible, and usually one proof will be so much less grotesque than the rest that it will be accepted, and will make a picture which gives entire satisfaction. A full or three-quarter length will often be admired in such cases, where the bust which was ordered is not liked at all.

One sometimes has much the same experience with a lady's double chin,— it simply must be eradicated, which is no easy task. A certain "tilt" to the chin in posing will often do wonders,— and again that etching tool!

Yes; the photographer meets many funny people. Perhaps we will have another talk about it some day, and then I will tell you of some of the other varieties I have met.

Day-Baker: His Photographic Work

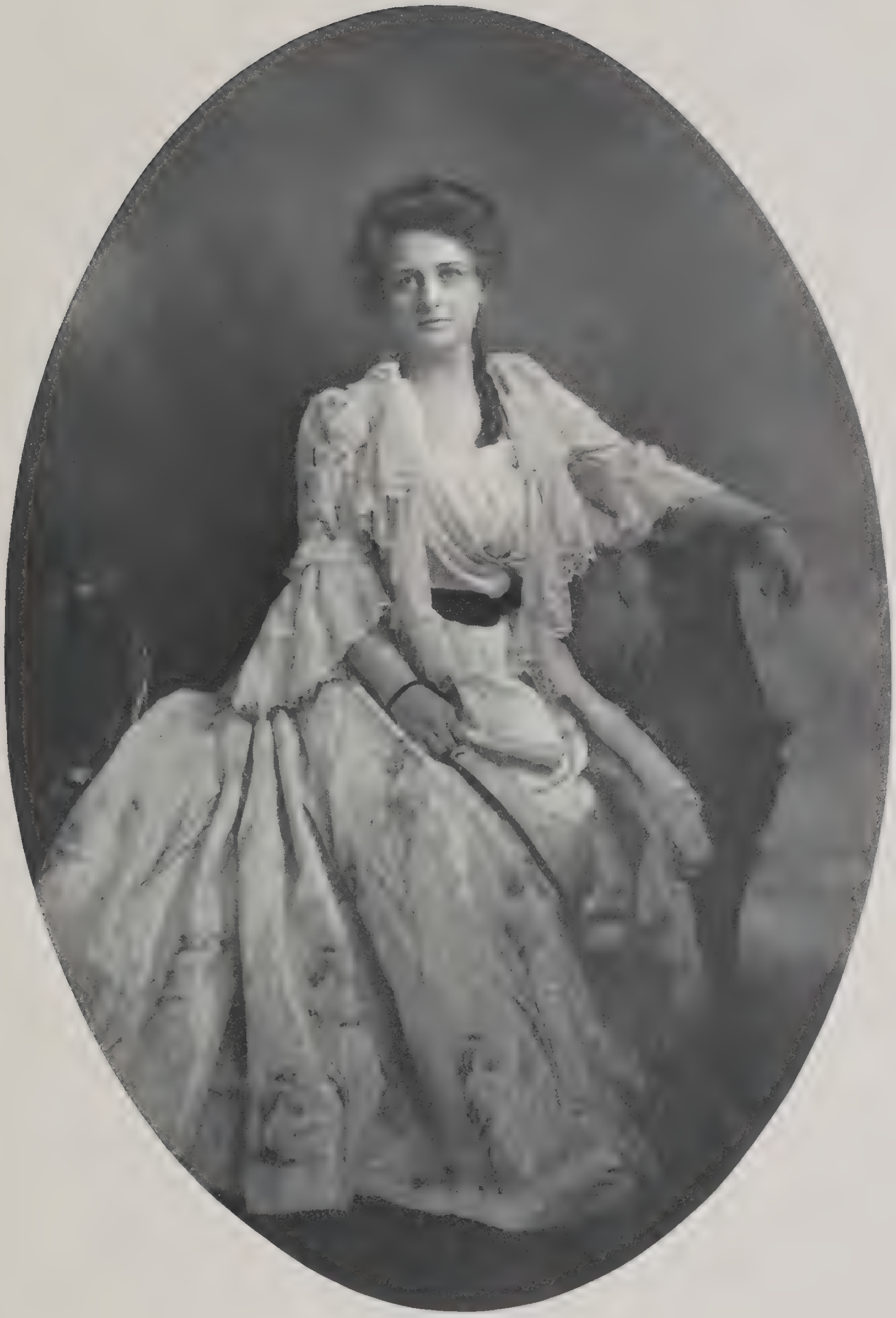
DURING the past two years the PHOTO ERA has published a number of articles written and illustrated by Day-Baker. His papers on Three-Color Photography and Its Commercial Application have interested alike enthusiastic photographers and progressive business men, who can see great possibilities in the process so interestingly described and so comprehensively pictured. The standard of the printing of the three-color photographic process work, done under the personal supervision of Day-Baker, for the purpose of illustrating his articles, has called forth the highest praise, and numerous inquiries as to the personality of the author.

Day-Baker is an amateur photographer, of Philadelphia, whose principal effort in the photographic line has been devoted to window-portraiture. In our April, 1902, issue, we published an article from his pen in which he described his methods. The examples of his work were of a marked degree of excellence, and, with the text, made an article of such interest to photographers that it was reprinted complete by a number of other publications.

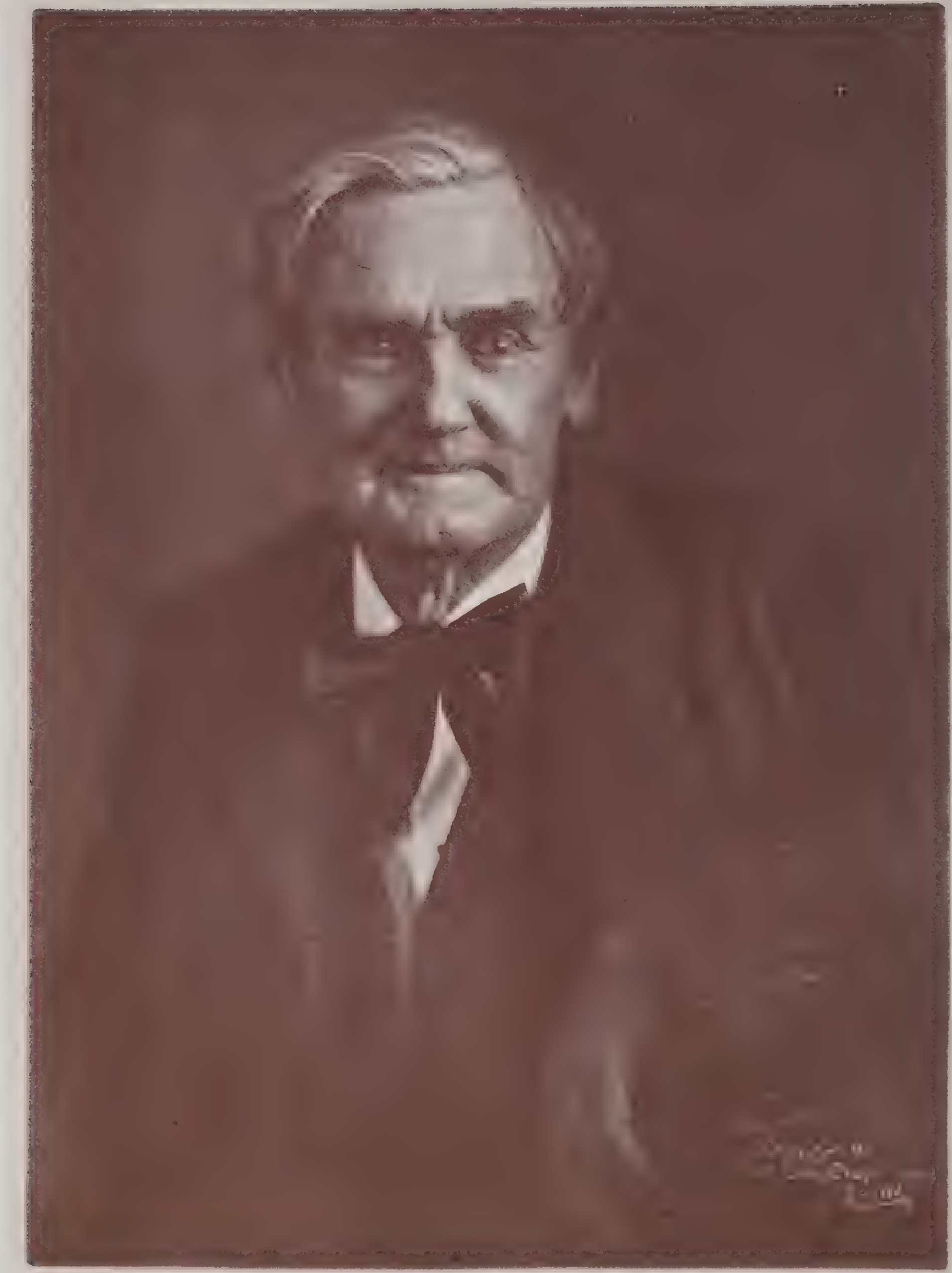
Perhaps one of his highest achievements has been the photographic education of Master Howard Day Aiken, the wonderful child portraitist, of Philadelphia, some of whose pictures were reproduced in our February, 1903, issue.

Day-Baker is well known to almost every publisher and printer of Boston and Philadelphia, as for fourteen years he has represented one of the largest printing-press manufacturers of this country. His combined knowledge of photography, printing, and machinery, and his close application to the study of the three-color photographic process have been of great value to those he served, as almost all of the successful three-color photographic process pressrooms in the East have been installed under his supervision.

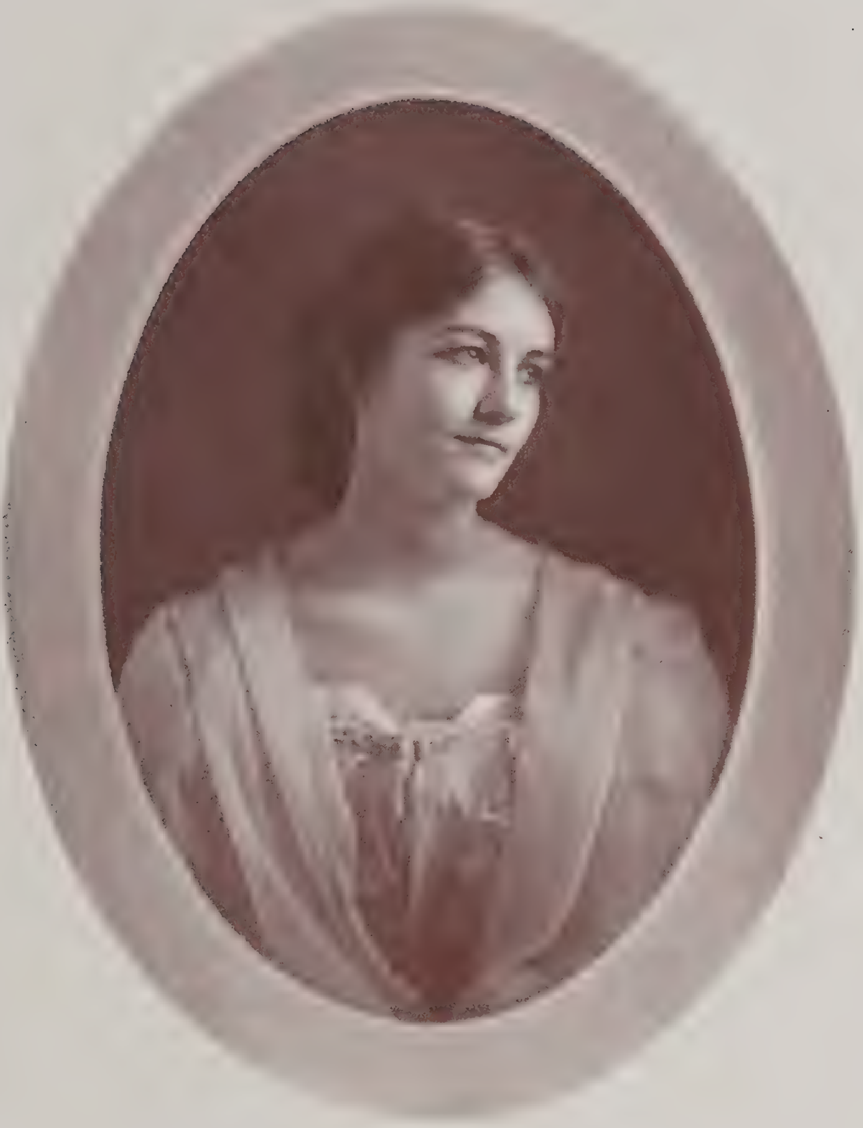
There is no doubt but what Day-Baker's knowledge of photography, presses, inks, paper, and printing will, in the near future, place his name at the head of the comparatively short list of workers in this country in the three-color photographic process.



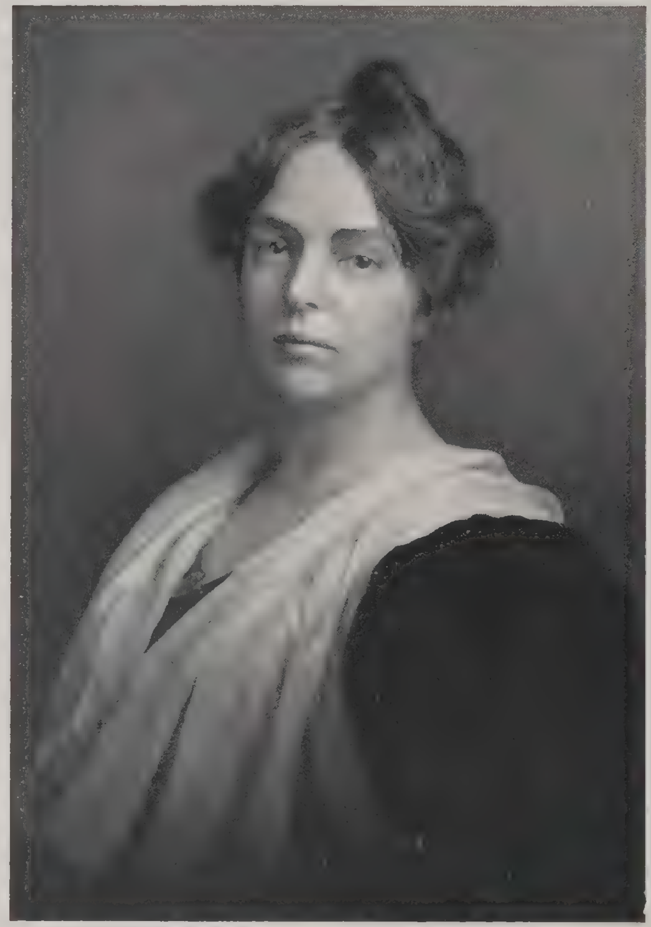
PORTRAIT OF MRS JOSEPH JEFFERSON JR
By GARO



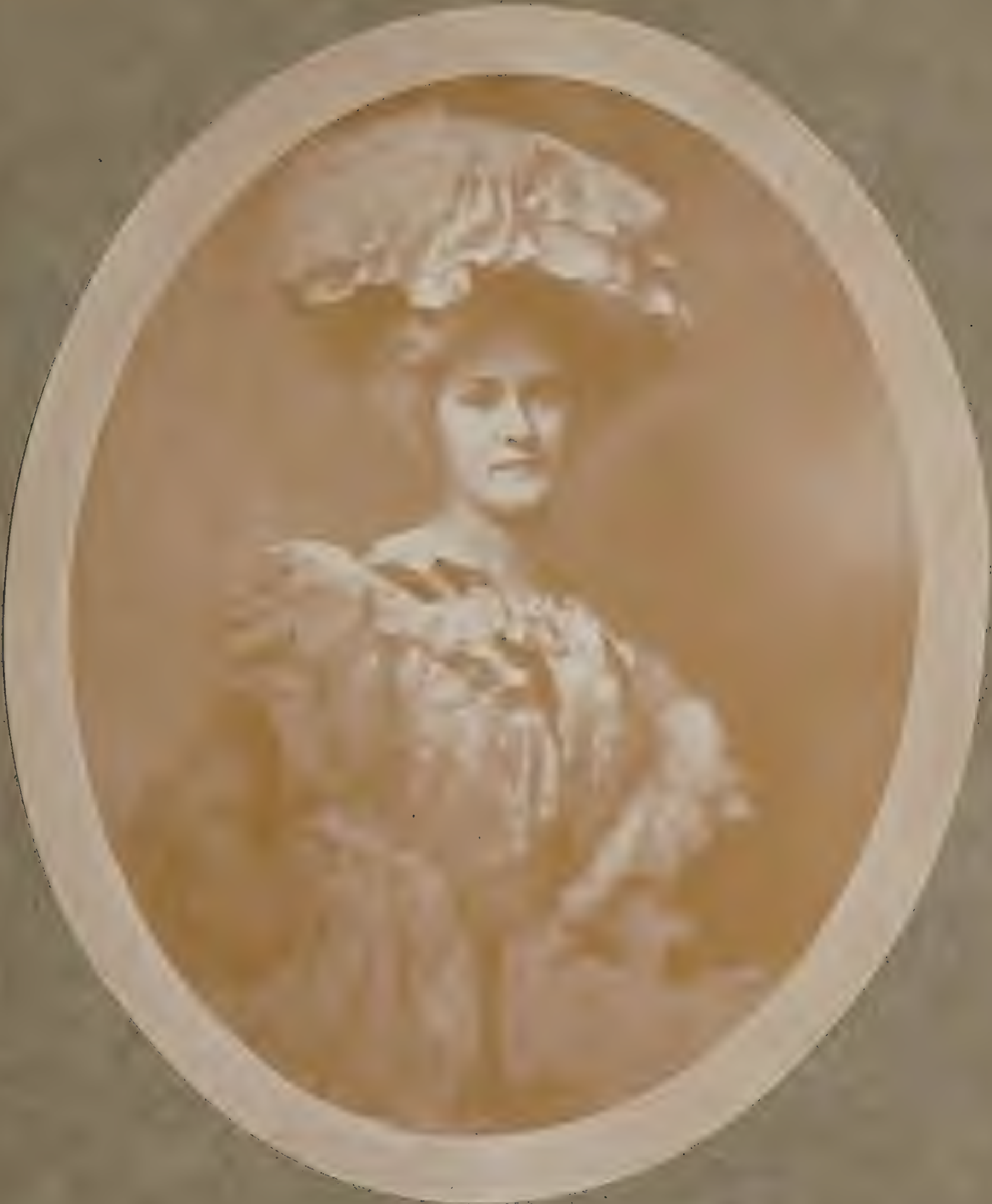
PORTRAIT OF JOSEPH JEFFERSON
By GARO



PORTRAIT STUDY
By GARO



PORTRAIT OF MRS S J KITSON
By GARO



PORTRAIT OF MISS PAULINE CHASE
By GARO

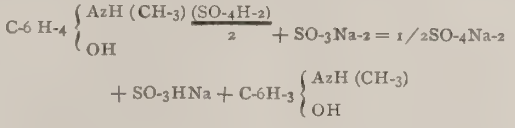
Metochinone, a New Developer

M. M. LUMIERE AND SEYEWETZ

THE methylparamidophenol sulfate, better known under the commercial name of metol, is often mixed with hydrochinon, and thus is obtained a developer possessing qualities differing widely from those of either substance used separately. We have thought that those new properties could well be attributed to the formation of a real chemical combination between those two substances, of which one, the hydrochinon, is exclusively acid, while the other acts as a basis. Our hypothesis has been confirmed by experiments, and we succeeded in isolating a well-defined combination of those two substances.

Obtention of the New Compound. — Saturated solutions of metol and hydrochinon are prepared and mixed in the proportion of two molecules of metol to one of hydrochinon. The mixture is then saturated with anhydrous sodium sulfite. After a while a white precipitate is formed, which presents itself under the form of white, shiny scales, melting without decomposition, at 135 degrees C. This melting point differs widely from that of the hydrochinon, 169 degrees C, and also from that of metol, 87 degrees C. Cold water dissolves 1 per cent of this compound at 15 degrees C, and boiling water about 10 per cent; by cooling, the compound crystallizes easily out of this saturated solution. It is readily soluble in cold alcohol (20 per cent at 15 degress C), and less soluble in cold benzine, ether, and chloroform. Acetone is the best solvent of metochinone, 100 cc of acetone dissolving about 35 grams at the ordinary temperature. Heated in a slightly acid solution, the combination is decomposed into the salt of methylparamidophenol corresponding to the acid employed and hydrochinon. This property permits to determine the composition of the substance, and shows that it really contains 2 molecules of metol for 1 of hydrochinon.

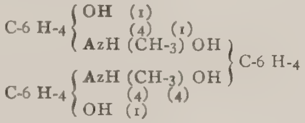
Theory of the Reaction. — It can be admitted that the sodium sulfite acting as an alkali on the methylparamidophenol decomposes it and liberates the basis according to the following formula: —



$$C_6H_4\left\{\begin{array}{l}AzH\,(CH_3)\,\frac{(SO_4H_2)}{2}\\ OH\end{array}\right. + SO_3Na_2 = 1/2SO_4Na_2 + SO_3HNa + C_6H_3\left\{\begin{array}{l}AzH\,(CH_3)\\ OH\end{array}\right.$$

Metol (sulfate). Sodium sulfite. Sodium bisulfite. Metol (basis).

The basis of the metol combines as soon as formed with the hydrochinon, forming a real salt, to which the following formula can be given: —



$$\left.\begin{array}{l}C_6H_4\left\{\begin{array}{l}OH\quad(1)\\ \qquad\;(4)\quad(1)\\ AzH\,(CH_3)\,OH\end{array}\right.\\ C_6H_4\left\{\begin{array}{l}AzH\,(CH_3)\,OH\\ \qquad\;(4)\quad(4)\\ OH\quad(1)\end{array}\right.\end{array}\right\}C_6H_4$$

This combination is not very soluble in saturated solution of sodium sulfite. The great facility with which this substance is decomposed into its components, under the influence of diluted acids, seems to show that the combination took place without elimination of water; hydrochinon would then simply have replaced the sulfuric acid in the methylparamidophenol sulfate.

We have given to this new combination the name of metochinone.

PHOTOGRAPHIC PROPERTIES

(a) DEVELOPMENT OF PLATES

1. Development in a Sodium Sulfite Solution without addition of Alkali. — The metochinone possesses as a developing agent very interesting properties which are shown neither by the metol nor by the hydrochinon, nor by a mixture of those two substances. It develops with only the addition of alkaline sulfite, like the chloride of diamidophenol (amidol). Its developing power in presence of sodium sulfite alone is slower than that of diamidophenol (about half less rapid), but it gives an image of which intensity and transparency in the shadows are very similar to those obtained with amidol.

We have determined the best formula for developing in sodium sulfite solution, studying the effect of various amounts, first of sulfite, and next of reducer.

Here is the formula of a normal developer which seems to give the best results: —

Water	1,000 grams
Metochinone	9 grams
Anhydrous sodium sulfite	60 grams

The metochinone is first dissolved, and then the sodium sulfite is added.

This solution is colorless and keeps indefinitely in corked bottles without the least alteration. In open bottles it colors very slowly, acquiring only after several months an appreciable shade, without, however, being modified in any way as a developer. The solution does not color in the development, and the liquid can be used over for another operation without the necessity of taking particular care for its conservation. The developer can be used until exhausted without getting dark, and, probably on account of this inoxydability, does not stain the fingers.

2. *Use of Alkaline Carbonates.* — The metochinone developer is, for the present, the only one which can be used without fear of veiling the plate either with or without alkali. The addition of an alkaline carbonate in developers containing this new compound considerably increases the reducing power of the solution. With one per cent sodium carbonate, the acceleration is well marked, but the maximum of effect is obtained with two per cent. By using sodium carbonate the development is completed two and one half times quicker than without alkali. Potassium carbonate acts exactly as sodium carbonate. The image obtained is less transparent that the one formed with sulfite alone, but it is more contrasty. The developer to which an alkaline carbonate has been added will give very good results with underexposed negatives, and can be used until exhausted.

The following formula has been found the best: —

Water	1,000 grams
Metochinone	9 grams
Sodium carbonate	10 grams
Anhydrous sodium sulfite	60 grams

3. *Use of Acetone.* — The remarkable solubility of metochinone in acetone makes this last reagent specially appropriate as a substitute for alkalines in the preparation of metochinone developer. A stock solution of metochinone in acetone can be prepared, containing 35 grams metochinone in 100 cc acetone, a small quantity of this solution being added to the corresponding volume of sodium sulfite solution; or, again, the acetone can be added to the ordinary solution of metochinone and sodium sulfite. Even small quantities have a well-marked effect. The reducing power increases until 5 cc acetone have been added to 100 cc of developer.

The two following formulæ have given good results: —

1.	Saturated solution of metochinone in acetone	30 cc
	Water	1,000 grams
	Anhydrous sodium sulfite	60 grams
2.	Water	1,000 grams
	Metochinone	9 grams
	Sodium sulfite	16 grams
	Acetone	3 cc

The developer possesses already a sufficient power, even when the amount of metochinone and acetone used is a good deal less than the one indicated in the above formulæ.

4. *Use of Caustic Alkalies.* — Caustic alkalies as well as alkali carbonates can be added to this strange developer, thus increasing considerably its power, without fear of veiling the plate. By adding 0.5 grams of caustic lithia to 100 cc of normal developer, the development is effectuated twice as quick as with sodium carbonate, and five times quicker than with sodium sulfite alone. The maximum of effect is obtained when one per cent of lithia is added. The solution possesses then a great energy, and may be used with great advantages with underexposed plates.

5. *Use of Formosulfite.* — The formosulfite * is a compound which plays at the same time the role of sulfite and that of alkali.

The following formula has given very good results with this substance: —

Water	1,000 grams
Metochinone	9 grams
Formosulfite	60 grams

As far as the developing power is concerned, the formosulfite acts with the metochinone like the alkali carbonates, while it acts like caustic alkali with other developers, hydrochinon, for instance.

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* See our last issue.

6. *Use of Potassium Bromide.* — The metochinone developer is very sensitive to the action of postassium bromide. With 2 or 3 cc bromide solution at 10 per cent for 100 cc developer, the restraining effect is well marked. This property allows one to get very good results with overexposed plates.

(b) DEVELOPMENT OF PAPERS

The remarkable property of this new development, being sensitive to the action of small quantities of alkali without its solution getting appreciably colored, makes it particularly adapted to the development of gelatino bromide papers.

Even in presence of sodium sulfite alone, with the formula of normal developer that we adopted for plates, very intense shadows, very much like those produced by diamidophenol, and very pure high-lights are obtained. The addition of a small quantity of alkali does not spoil in any way the clearness of the whites, and increases the depth of the shadows in such a way that they are even denser than those obtained by diamidophenol developer.

Here is the formula which we propose for the development of gelatino bromide papers: —

Water	1,000 grams
Metochinone	9 grams
Anhydrous sulfite . . .	60 grams
Anhydrous sodium carbonate .	10 grams
Bromide solution at 10 per cent,	10 grams

Alkaline sulfite and carbonate can be advantageously replaced by formosulfite. The following is the formula of normal developer with formosulfite: —

Water	1,000 grams
Metochinone	9 grams
Formosulfite	60 grams

With this developer images like those resulting from the use of formula containing an alkaline carbonate are obtained.

CONCLUSIONS

The metochinone constitutes a new developer, very remarkable as well for the development of plates as for the development of bromide papers. It is a very good addition to the short list of developers working without alkali; like them, it does not affect the gelatin, and presents, moreover, the following advantages which had not been realized with the other developers of the same class:

1. The solutions keep without appreciable alteration, even in open bottles.
2. A great number of plates can be developed in the same bath, for it can be used until completely exhausted.
3. The reducing power of the developer can be largely increased by addition of caustic or carbonated alkalies, or, still better, by formosulfite, without fear of fogging the plate. This property gives a great elasticity to the developer.
4. The developer is sensitive to the action of potassium bromide, so that its use is possible in case of overexposure.

A Plea for the Landscape

CHESTER L. THOMPSON

Touched by a light that hath no name,
 A glory never sung;
Aloft on sky and mountain wall,
 Are God's great pictures hung.

IT seems to be the custom just now to decry the landscape, to say that it cannot compare with portraiture or genre. It is true that portraiture, and especially genre, is much more interesting to the ordinary, prosaic person.

If you show him a genre into which you have succeeded in instilling some measure of sentiment and feeling, he immediately begins to ask who the people are and when and where the picture was taken.

Show a fine picture to a true artist and he never thinks about such things, but is absorbed in meditation, drinking in the feeling, the poetry.

Mr. Munsey tells us that there is little demand for poetry to-day. People want exciting stories, especially short stories. But is the short story higher art than the poem? When a man wishes to express in words some noble, inspiring emotion he naturally runs to verse.

And the poetry which has always appealed most to me, which has made me throb and thrill with that indescribable sadness and longing which Longfellow has embodied in his poem, "The Day Is Done," is the poetry inspired by nature, by the woods and fields and blue skies and laughing brooks.

Although Tennyson, probably the grandest poet who ever lived, devoted most of his verse to people and their emotions, yet those poems of his which have most appealed to me are descriptions of nature. One of the most beautiful things ever written is Part I of "The Lady of Shalott."

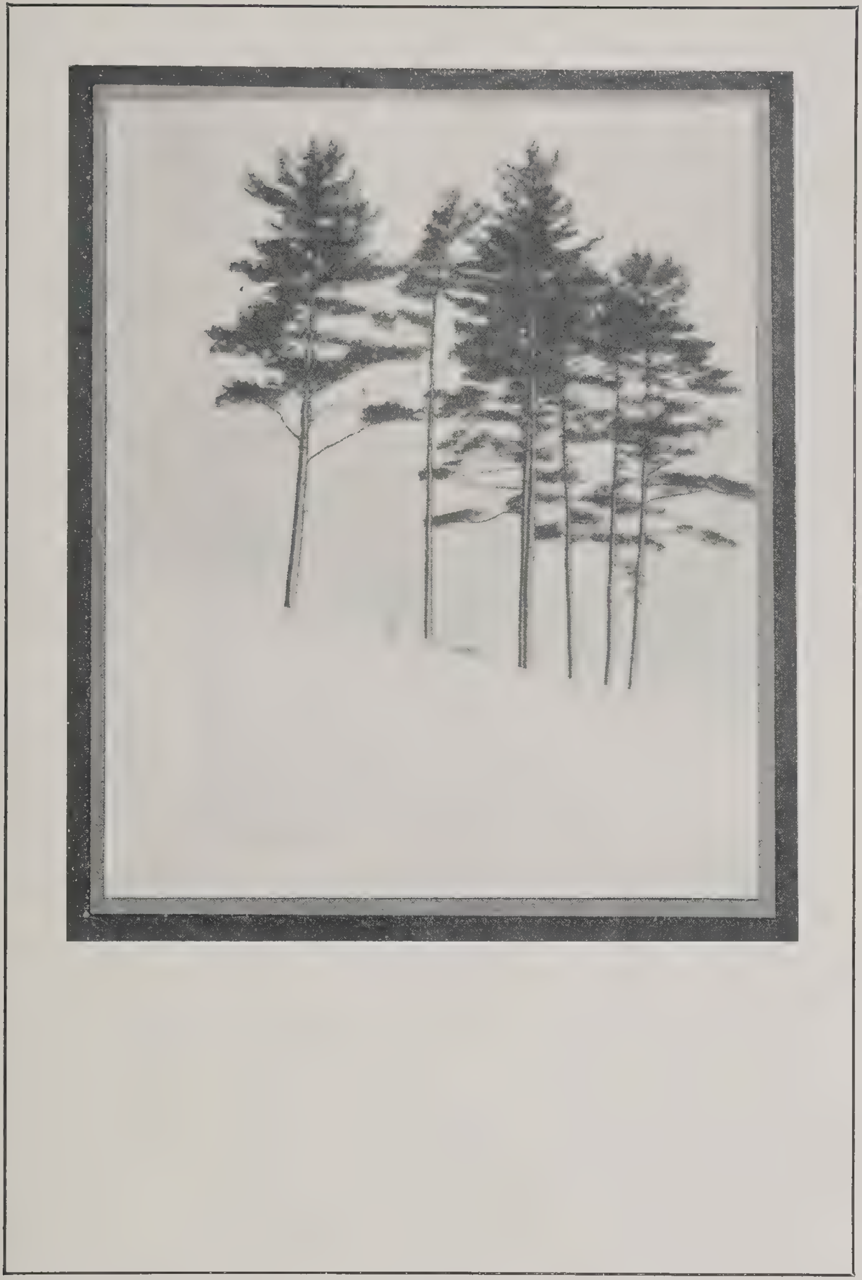
On either side the river lie
Long fields of barley and of rye,
That clothe the world and meet the sky;
And thro' the field the road runs by
  To many-towered Camelot;
And up and down the people go,
Gazing where the lilies blow
Round an island there below,
  The island of Shalott.

Willows whiten, aspens quiver,
Little breezes dusk and shiver,
Thro' the wave that runs forever
By the island in the river
  Flowing down to Camelot.
Four gray walls, and four gray towers,
Overlook a space of flowers,
And the silent isle embowers
  The Lady of Shalott.

The emotions of people seem so little and insignificant compared to the grandeur and majesty of nature. One longs to get away from men, with their little quarrels and troubles and misfortunes, and wander through the woods and fields, to watch the white clouds floating in the blue sky, and mayhap to hear the buzzing of bees round the sweet-clover heads.

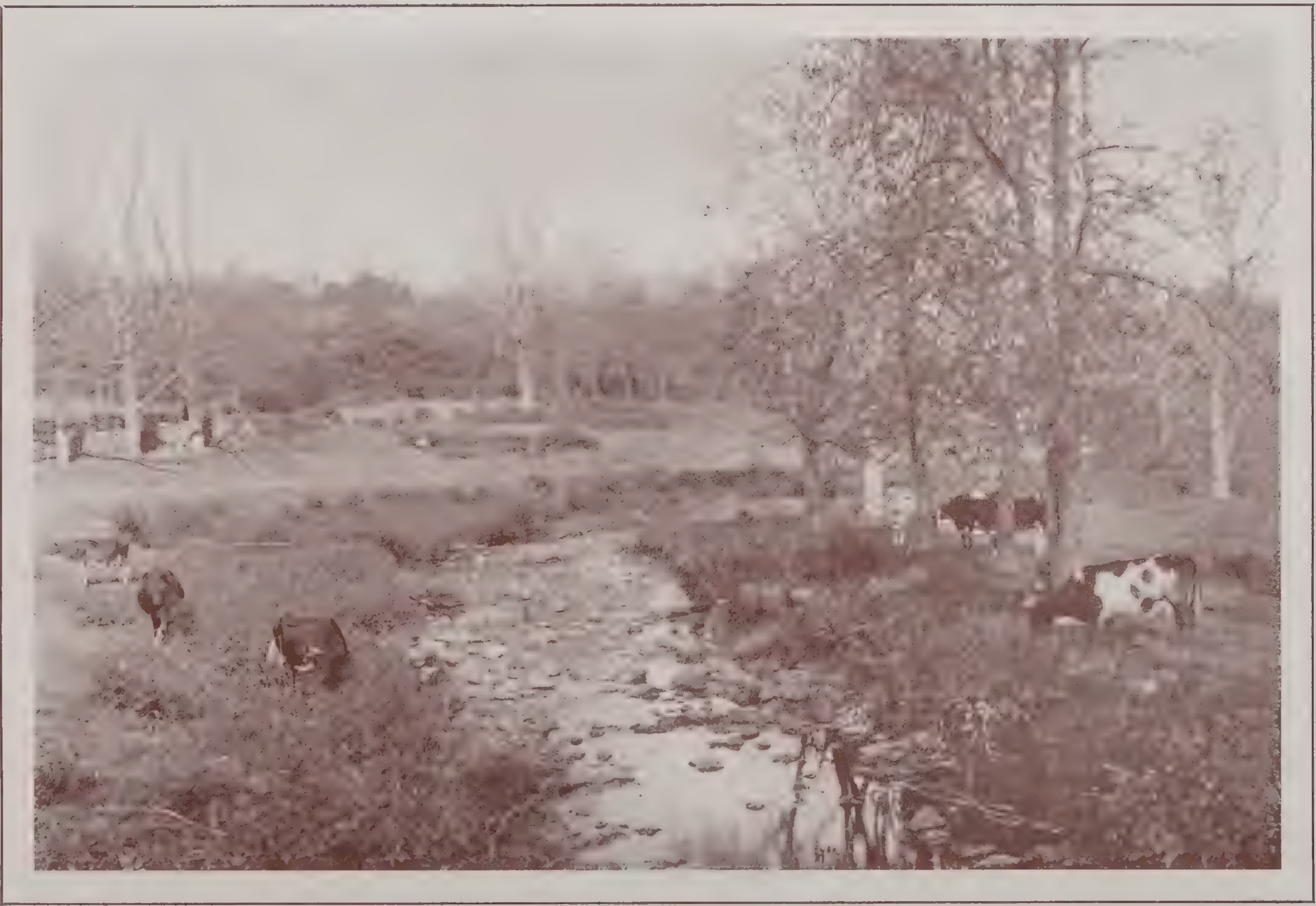
Did you ever go out in the early morning, some bright Spring day, and hear the meadow larks singing? How clear and pure and sweet it comes, wafted over the green, sweet-smelling meadows.

An so, let's take up our camera and away to the beauties of nature, and if we get no pictures on our plates we will get them in our hearts.



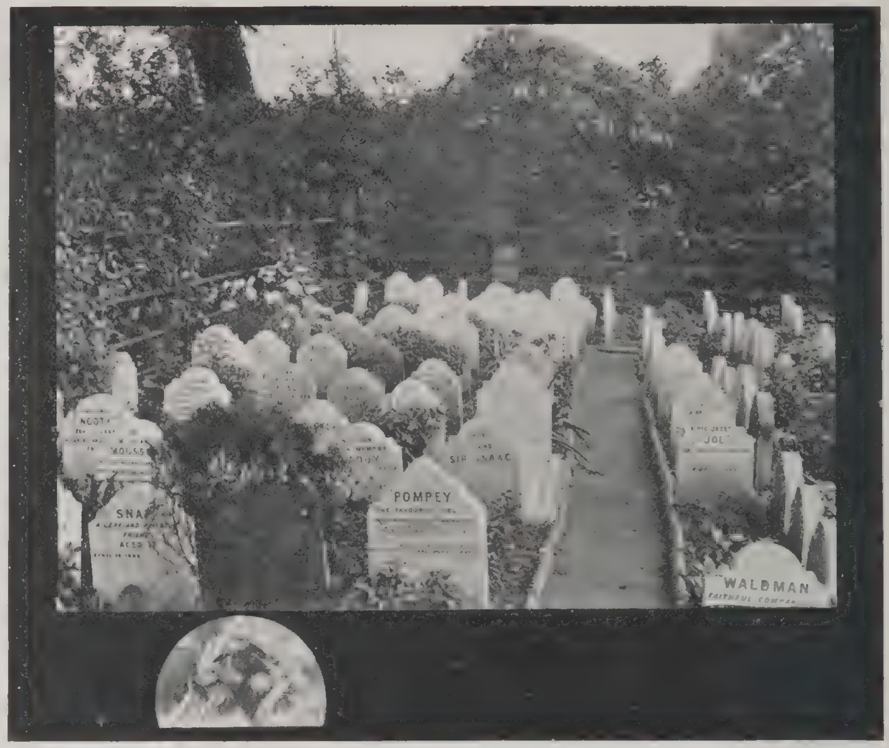
THE SEVEN PINES
Awarded Bronze Medal by Royal Photographic Society of Great Britain 1902
By F ROY FRAPRIE

PHOTO
ERA



SPRING
By WILLIS A DEAN

SPRING PLOUGHING
By H A LATIMER



THE DOG CEMETERY
Hyde Park London
By W G CORTHELL

The Dog Cemetery in London

WENDELL G. CORTHELL

VERY few American travelers in London have ever found the little secluded spot in the very heart of the city where are buried so many faithful dogs who served those who did not forget them when the end came.

One never knows whether to believe what he finds written on the tombs and stones over departed men and women, so he saves his tears till he finds what he knows to be genuine. No doubt most of the epitaphs tell the truth, but the few spurious ones cast a little shade of doubt over the others. Not so in the cemetery for dogs. Men do not waste their breath and money over dogs they have not loved. The writer knows of no more pathetic spot than the pretty little enclosure beside the house of the lodgekeeper at the Victoria Gate, at Hyde Park, London.

This last summer he, for the third time, spent an hour reading the stories of faithful service and mourning hearts as recorded on the marble stone in this unique cemetery.

The reader will see in the picture nothing conventional. He may know that every word is genuine. As it will be difficult to make out the epitaphs in the little view, we will copy some of them:

Dear Little Old Dog
Masher
Christmas. 1890.

Curly
He pined for his lost Mistress
and died
A faithful friend.

Missed by his many friends, surely he was
not a dog only; he was human.

In loving memory of
Chum
My faithful and loving poodle for 10 years
So lonely without my doggie.

There are men, most good and wise, who say that
dumb creatures we have cherished here below shall give
us kindly greeting when we pass the Golden Gate.

She brought the sunshine into our lives, but
she took it away with her
To our gentle, lovely little blenheim
Jane.

Dear old Topsy for over 16 years
the faithful friend of Sir ———
and his family. Loved, lamented, and respected.

In loving memory of dear
Chin Chin
a perfect dog.

Could I think we'd meet again
It would lighten half my pain.

Pat
"Dogs is folks."

Shall he whose name is "Love"
Deny our loving friend a home above?
Nay, he who orders all things for the best,
In paradise will surely give them rest.

Our Robin
Only good night dear one
She talked with soft brown eyes
More eloquent than speech.

Foreign Abstracts

Comparative Developers

Mr. J. Gaedicke, in the *Photographische Wochenblatte*, of recent date, made an interesting comparative test of developers. Each new developer has its champions, and it is rather hard sometimes to get down to the real facts. In testing developers, it should be remembered that the plate which records the impression must be harmonious, that is, capable of giving a good tone to the high-lights, shadows, and intermediate tones, and not too contrasty or too flat, as the case may be. A series of developers was made up, and plates developed in them which had been exposed under a sensitometer made of sixteen steps or layers of onion skin paper. The records were as follows:

The Picture Appeared in	Length of Development	Last Number Visible	Intensity
Rodinal	25 seconds	3 minutes	13 moderate
Edinol	22 “	3 “	13 mod., very clear
Pinakol	15 “	2 “	13 moderate
Adurol	20 “	3 “	13 strong
Amidol	13 “	2 “	13-14 pretty st'ng
Ortol	21 “	2 “	13 little less strong
Glycin	37 “	4 “	13 very strong, very clear
Metol	5 “	1 “	13 moderate
Hydroquinone	80 “	5 “	13-14 strong
Pyrocatechin	165 “	11 “	13-14 very strong, very clear

The most rapid developer is Metol; the slowest Glycin, Hydroquinone, Pyrocatechin; the most intense negatives were produced by Glycin, Hydroquinone, Adurol and Pyrocatechin; the clearest by Pyrocatechin, Glycin, and Edinol.

The keeping qualities of the solutions which are ready for use are excellent in the case of Rodinol but remarkable in the case of Adurol. Amifol and Ortol also keep well, Edinol and Pinakol keep least of all. From the above experiments it appears that Adurol and Glycin do not receive really as much consideration as they deserve, which is possibly due to the fact that the public is not sufficiently familiar with them. Adurol possesses the following advantages:

First. A solution of Adurol ready for use and in the proper strength will keep perfectly white for a very long time, even when the bottles are only partially filled, and in this respect it is superior to the other developers, especially to Edinol and Pinakol and Pyrocatechin.

Second. Adurol is the quickest working developer of those four developers which yield the best intensity and it combines, in the highest degree, speed and intensity.

Third. From the experiments it has been shown that Adurol produces negatives which render correct true light values than any of the other rapid developers.

Fourth. It is superior to Hydroquinone for the reason that it is not affected by the temperature.

Mercury Intensification

Chapman Jones details what he claims to be the only permanent and reliable method of intensification, as follows: Three solutions are required. A saturated solution of mercuric chloride may be used indefinitely and poured back after use, provided undissolved salt remains in the bottle. A saturated solution of potassium oxalate keeps indefinitely, but can be used only once. A saturated solution of ferrous sulphate must be made fresh as used. No additions should be made to any of these solutions, except the mercuric chloride, which should have half a dram of hydrochloric acid to each pint. The method is to immerse the plate in the mercury solution until bleached, then wash an hour. Then measure just sufficient of the potassium oxalate solution to cover the plate and add to it one sixth by measure of the ferrous sulphate solution, and apply to the plate. When the image is thoroughly blackened, as shown by looking at the back of the plate, wash as usual. These directions should be rigorously followed, and no additions or changes made in any of the solutions. (Amat. Phot., 1903: 248).

Tsocyanines as Color-Sensitizers

Miethe has investigated the coloring matters known as isocyanines and finds that they are all good color-sensitizers, and that the ethyl and methyl salts are especially adapted for the production of panchromatic plates. Such plates have almost equal sensitiveness over the whole visible spectrum. For practical use the ethylisocyanine is preferable, for its sensitizing power does not extend too far into the red, and so a fairly bright red light can be used in working. (Chem. Industrie, 1903, 25: 54).

Yellowing of Bromide Prints

Developed bromide prints are in general extremely permanent. In certain cases they turn yellow from a cause not yet known. Gaedicke has made a systematic investigation as to the cause. He finds that owing to the thin emulsion, three minutes is sufficient for complete fixation, and that if the prints are not sufficiently fixed, they do not slowly turn yellow, but become grey immediately on exposure to light. Therefore, yellowing cannot be attributed to insufficient fixing. Also the yellowing cannot be laid to the insoluble double sodium silver thiosulphate. The true cause is in the development. There are certain bromide papers which allow only a short development, and by longer treatment give an invisible or slightly visible yellow fog which is light-sensitive, that is, becomes stronger in the light. This yellow fog, besides, in case a little hypo remains in the print, causes the formation of silver sulphide. (Phot. Almanach 1903, 23: 61).

Time Development

H. W. Bennett, in a recent lecture before the London Camera Club, presented a series of very effective arguments in favor of controlled development as against time development. The best practical workers have always advocated the use of developing solutions of different composition, according to the exposure, and it is only in recent years that mechanical development, either by the time method or the factor method, has been put forth. The lecturer showed conclusively, by a series of carefully prepared diagrams, that all these claims were false. In a solution of uniform composition with varying times of development, the steepness of the curve of contrast increases markedly with the time of development. This is due to two causes. The whole of the image does not appear at once, as frequently stated, and the image does not grow uniformly, density increasing in the shadows proportionately more quickly than in the high-lights. Overexposed plates should, therefore, receive less development than those correctly exposed, and, if the density is insufficient, intensification should be resorted to. Increasing the alkali produces increase of detail in the shadows, combined with less density in the high-lights; therefore, underexposures should receive a developer stronger in alkali. Diluting the developer gives a softer scale of gradation; with equal density of the shadow detail there is considerably less opacity in the high-lights. A much greater gain in the same direction is found when the dilute developer receives at the same time an increased quantity of alkali, this being possible without danger of chemical fog. The effect of bromide is to weaken the shadow detail, and to give more strongly marked gradation in the lighter portions of the scale. It increases contrast in flat subjects. These statements all apply to a pyro-ammonia developer, but may be applied to all others also.

The general conclusions are these: Variation in time of development alone will exercise considerable control over the character of the negative, but far less than may be obtained by different degrees of development in modified solutions. A well-restrained developer weak in alkali will give greater contrast than the normal solution, and should, therefore, be used for subjects deficient in contrast, or for overexposure. Increase of alkali will give more and stronger shadow detail for the same degree of density in the high-lights. Dilution of the developer, with increase of alkali, will produce much more, and considerably stronger shadow detail, with far less density in the lights. This method should always be adopted for subjects possessing great contrast, and for underexposure, as it secures greater softness. This is the method adopted universally by experienced workers for developing negatives of harshly lighted interiors. The differences due to modifications of the developer decrease as the operation proceeds, but they are still strongly marked at all stages within reasonable and practical limits. (Amateur Phot., 1903: 287).

The Crucible

COXIN

The latest method for the avoidance of the use of the dark room is one recently invented in Germany and patented in most of the countries of the world. The "Coxin" method, as it is called, is the use of a solution of very deep red color, in which the plate is soaked on removal from the camera, after which it may be developed in daylight without fear of fogging. Although the promoters of this process claim that the Coxin solution, which is sold at a rather high price, is more than a mere dye, the German patent specially claims the use of Crocine Scarlet 3B., although other red dyes may be used, provided they are easily absorbed by gelatin and again washed out. It is obvious that the use of the dark room is not abolished by this process, for the plate must be soaked in the Coxin solution, either in the dark or by red light. Moreover, the process would probably prove of very little use for orthochromatic plates, and especially the panchromatic plates of Cadett, Schleussner, Berutz, and Lumiere. Furthermore, the Coxin solution is of such an intense color that it becomes impossible to view the plate carefully by transmitted light, and the judgment of the stage of development reached is difficultly made. Naturally, also, a prolonged washing is required to clear the film completely, it being obvious that a dye sufficiently non-actinic to prevent light action on a dry plate must be carefully removed to render printing possible.

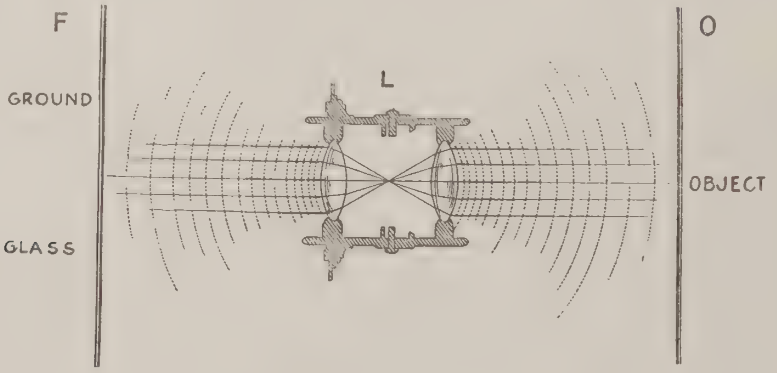
Previous methods of similar character have been more in the nature of adding a colored substance to the developer instead of to the plate. In 1889 Spiro, in England, patented the use of aniline carmine or aniline orange for making the developer impervious to light, and in 1892 Williams, in the same country, patented the use of an alkaline salt of rosolic acid for the same purpose. This dye has practically no staining effect on the film unless used in inordinately large quantities.

TWO NEW FOREIGN PRINTING PAPERS

The incitement of intense competition appears to make the foreign manufacturers of photographic materials much more attentive to the wants of the amateur than is the case in this country. Not only are the plate-makers abroad making truly panchromatic plates at a moderate price, something that no American plate-maker appears to care to experiment on, but the manufacturers of printing papers are continually striving to render new effects possible. For instance, an Austrian firm has recently put upon the market a new platinum paper. Unlike the usual makes, which require to be carefully protected from dampness, this paper is intentionally dampened for the purpose of printing out. By simply breathing upon the sheet for a moment, it becomes a printing-out paper, and the progress of the printing may be judged as easily as any other paper. When the required depth is reached, a simple immersion in water for five minutes produces a permanent print. The paper may also be printed out in the dry state to the same depth as ordinary platinum paper and then developed black with the oxalate developer, or to warm tones with a developer containing mercuric chloride. Another paper, this one made in Switzerland, is a plain silver paper, giving all the beautiful red, brown, and purple tones of which such paper is capable, and keeping well. The paper is sensitized, not on the surface, but straight through, and gives prints of wonderful depth. It may be printed on both sides, either for proofs, or giving sheets which may be bound into a book with pictures on both sides of the leaf, thereby affecting a saving of one half.

REDUCING BROMIDE PRINTS

A very neat way of reducing bromide prints which are fogged, or overprinted, or have surface stains, is by the use of potassium cyanide and iodine. In using this solution, it should be borne in mind that potassium cyanide is one of the most deadly of all the inorganic poisons, and that serious consequences may result from getting it into a cut, as well as from swallowing it. Take enough water to cover the print, and to each ounce add forty drops of a saturated solution of potassium cyanide and thirty drops of a saturated solution of iodine in alcohol. Move the print in this until almost enough reduction has taken place, and then wash quickly in plenty of running water. When well washed, dry.



See article on opposite page.

The Round Robin Guild

Conducted by Elizabeth Flint Wade

(Any amateur photographer may belong by sending in his name and address)

"The most erudite person," says a writer in a recent number of the "Atlantic," "is intelligent only in spots," and later in the article he challenges the reader to enter any company of modern scholars and ask what they know about any large subject and he will find that each one will hasten to take the poor debtor's oath.

We talk glibly of this and that, and use terms which lead one to believe we are well informed on some special subject; but suppose we were subjected to a rigid questioning, would it not be revealed that we were "intelligent only in spots?"

Suppose, for instance, the amateur photographer was asked to define light, the medium by which he makes his pictures, or lens, the principal piece of his camera. Could you, my amateur reader, give an intelligent answer to these questions?

Knowledge, it is sometimes said, consists in knowing where to go for the information one needs. Suppose, then, we go to the dictionary, and see what information we can obtain on these two subjects. "Light," we find, "is that form of radiant energy that acts upon the retina of the eye and renders visible the objects from which it comes"; and "the lens," we read, "is a piece of glass, or other transparent substance, bounded by two surfaces, one of which is spherical; and its use is to make the rays of light, 'the radiant energy,' convergent or divergent, and so to form images as in an optical instrument."

There you have the two words defined; but do you know any more about the meaning than you did before you consulted your book of definitions?

The dictionary tells us what a thing is, but very little about it, and as the lens is the instrument, and light the medium by which we make our pictures, it behooves the amateur to acquire a little more knowledge on the subject than can be obtained from this indispensable volume.

The sun is, of course, our great source of light, but how does this light reach the earth? Does it come in one great bar sent forth from the sun and reaching straight to the earth? Not at all. Scientists tell us that it travels in waves in the same way that sound travels. The speed of these light waves is something marvelous. Those that affect the eye travel at the rate of 186,425,000 miles per second. When these waves strike an opaque object — an object through which they cannot pass — they are broken up by the rough particles of its surface, and each of these particles becomes a centre from which the reflected rays spread out in all directions. The eye, when turned toward an object from which these rays are reflected, has the power of condensing them to corresponding points and rearranging them on the retina in the same form in which they are reflected, and this constitutes vision; that is, we say we see the object.

The photographic lens is constructed and acts on the same principle as the eye. Like the eye, it receives on its surface the waves of light from every point of an object, rearranges them into the form from which they are reflected, and we have the photographic image.

To make this image visible to the eye a screen of ground glass is placed at the point where the image is formed, and the eye perceives the image in the same way it perceives the object itself — through the reflection of the light waves.

To know how the lens receives and rearranges these light waves it is necessary to know something of the construction of a lens.

The diagram shows the cross section of a lens — a lens cut in two, crossways (see opposite page). It will be seen that the center is much thicker than the edges. Light waves vary in speed according to the density of the medium through which they pass. They pass through the air quicker than through glass, and the thicker the glass the slower the speed of the wave passing through it. A light wave is curved and grows larger the farther it travels from the object from which it was sent, and spreads out in much the same way as the rings of water grow when caused by a stone tossed into a pond.

The diagram shows the way in which the light waves travel; the point at which they strike the lens; the effect that the different thicknesses of the lens has on them; and the form they assume after they have passed through the lens. O is the object from which the waves of light travel. L is the lens. F is the point at which the waves of light meet again to form the image of the object from which they were reflected.

The center of the light wave, being curved, strikes the glass first. The glass being a denser medium than the air, the speed of the wave is retarded, and instead of keeping its curved form it straightens out. The lens, as has already been mentioned, is thicker in the middle than at the edges, therefore the outer edges of the wave pass through the glass before the middle of the wave has passed through the thicker portion or center of the lens. This changes the direction of the wave and causes it, when it has passed quite through the glass, to be curved in an opposite direction, and the waves now pass on in a reversed motion, growing smaller and smaller, until they meet at the point where the image of the object from which they proceeded is formed. If there be no screen at this point to receive the image the waves pass on again in the same form in which they first left the object. This changing of the direction of the waves is called refraction, a turning or bending from the direct course.

Light has not only illuminating power, but chemical power as well. The chemical rays and the illuminating or visual rays do not all meet at the same point, and if a lens were composed of a single piece of glass the image formed by it, though visible to the eye, would not be formed at a point to produce a clear image on a sensitive plate; so, to bring the visual and the chemical rays together at one point and produce a clear picture, glasses of different density are so combined that these rays coincide.

Crown and flint glass are used in the manufacture of lenses, and they are so arranged that the one corrects the "chromatic aberration" of the other. (Chromatic aberration is the term used to describe the failure to meet of the visual and chromatic rays of light).

A single lens is a lens composed of two lenses cemented together, the condensing part of the lens made of crown glass and the diffusing lens made of flint glass. A double lens is two of these single lenses separated from each other with a diaphragm or stop placed midway between them. Double lenses have a set of diaphragms of different sizes while a single lens has usually but one stop fixed permanently in place.

The point at which the rays of light gather after having passed through the lens is called the focus. Depth of focus is the power of a lens to define, with the same sharpness of detail, objects which are placed at different distances from it. To increase the depth of focus and bring the different objects, say in a landscape, into the same clearness small stops are used. Sometimes the lens of a small hand camera has great depth of focus, while a portrait lens will have very little.

We often hear of a "fixed focus" lens. There is really no such thing. Small cameras often have a lens of such construction that objects at a certain distance, perhaps six or eight feet and all distances beyond that point, will be equally well defined in the finished picture.

"Conjugate foci" is a term which is often found very puzzling, but it is very simple when explained. It means the relation between the different distances at which objects are formed by the lens. The farther an object is from the lens, the nearer to the lens is the object formed. And, on the contrary, the nearer the object is to the lens, the farther away is the image of the object formed. Therefore, for every distance at which an object is placed from a lens, there is a corresponding distance in the formation of the image by the lens. These relative distances are called the conjugate foci.

It behooves the amateur to know his lens, its limitations and its power, so that he may use it understandingly and in a way to get the best possible results; but, whatever the lens, it is the man behind it who uses it that is, in a great measure, responsible for the good or bad quality of the work produced.

PASSE-PARTOUTS

A very decorative way to mount pictures in passe-partout fashion is to use long narrow strips of glass and put a series of pictures in the one frame. Take for example a set of four by five pictures of perhaps eight or ten in number. Get a strip of glass cut a trifle wider than the print and long enough to take them all in. The prints themselves should be made in tones that will harmonize with the color scheme of the room for which they are designed. If the room is in blue make blue prints, if in warm tones make black and white, or if in yellow tones make sepia prints. The pictures should be of a decorative kind for they are intended for that purpose, rather than for pictures. A set of marines, made up in blue prints and mounted in this way, are very "fetching" in a blue and white room. The binding comes in long gummed strips of brown, white, gray, and black, and has the appearance of leather. For a set of blue prints use white binding.

TONING BATH FOR ARISTO PAPER, WITHOUT GOLD

This bath gives excellent tones of browns and sepias. It will keep indefinitely. The formula is as follows:

No. 1. Nitrate of lead, one ounce; filtered water (hot), sixteen ounces; powdered alum, one fourth ounce. No. 2. Hyposulphite of soda, three ounces; filtered water, sixteen ounces. Dissolve both solutions thoroughly, then pour No. 1 into No. 2, stirring the solutions constantly and adding a small quantity at a time. When mixed put in well-corked bottles and let stand for twelve hours to ripen. It is a good idea to store it in small bottles, of perhaps eight-ounce size, and then pour melted wax over the corks. This will prevent the air from getting to the solution and causing oxidation. Use in the same way as for any combined bath.

ANSWERS TO CORRESPONDENTS

Carroll J.— High-lights is the term used to describe those parts of a print which show the strongest white in the picture. This is the reason your picture which you enclose is so flat, it has no high-lights to give it contrast. The negative was very much overexposed.

B. M.— The yellow stains on your negative may be removed by making a solution of one part iodide of potassium and twenty parts of water. Wash the negative and place it in this solution until the stains disappear. Wash well and dry.

Ellis R. Turner.— You can loosen the stoppers in your bottles of chemicals by dropping a little warm sweet oil in the neck of the bottle next to the stopper. Let it stand for ten or fifteen minutes and the stopper will usually come out easily. If it does not, repeat the operation.

Emily H.— Your prints which have turned yellow may be restored by placing them for a few minutes in a ten per cent solution of ammonia. As soon as the yellow has bleached out, wash and fix in a solution of hypo, one ounce to sixteen of water.

NATIONAL HISTORICAL PICTURE GUILD

Amateurs desiring to join this Guild and help in the great work which it promises to accomplish, are requested to send in their names without delay. A forecast of what is done will be given in the July number of the PHOTO ERA, which is to be an historical number. This undertaking will undoubtedly be one of the greatest of the century and all amateurs who wish to share in the fame of making it a success should not delay sending their names and addresses at once to this department.

Dr. E. M. R.— Mirrors are silvered as follows: After the plate of glass is polished on both sides, it is laid on a perfectly level table of great strength and solidity, usually of smooth stone, made like a billiard-table, with raised edges; a sheet or sheets of tinfoil sufficient to cover the upper surface of the glass are then put on, and rubbed down smooth, after which the whole is covered with quicksilver, which immediately forms an amalgam with the tin.

The superfluous mercury is then run off, and a woolen cloth is spread over the whole surface, and square iron weights are applied.

After this pressure has been continued a day and night, the weights and the cloth are removed, and the glass is removed to another table of wood, with a movable top, which admits of gradually increasing inclination until the unamalgamated quicksilver has perfectly drained away, and only the surface of perfect amalgam remains, coating the glass and perfectly adherent to it.

Notes and News

The Rochester Camera Club, of Rochester, N. Y., held its first annual exhibition, at the Mechanics' Institute Building, from March 30 to April 11. The club has not yet rounded out the first year of its existence, and many of the members are, comparatively speaking, novices in the art of photography; nevertheless, thanks to the energy and enterprise of the members of the club, a very interesting lot of pictures was exhibited. The club has among its members a few who work along the lines of modern artistic photography, and who strive to do work of a very high standard.

The president of the club, Mr. John Dumont, is one of the pioneers, in America, of artistic photography, and he has done much toward raising the standard of pictures produced by the camera. His collection of prints was one of the most interesting of the exhibition. One of his best pictures, entitled "The Village Choir," is an interesting group, a typical village choir of thirty years ago. The composition is good and the action of the figures admirable. Another picture of a young girl kneeling before a wayside cross, entitled "The Shrine," shows much thought in its arrangement and composition. The strongest thing in Mr. Dumont's collection, however, is a picture of the Main Street Bridge, Rochester. Business blocks are built along the bridge so that one walks along without ever suspecting that he is crossing the river. Mr. Dumont's print shows the river side of the bridge, and the play of light and shade upon the high walls of the buildings, with the dark river flowing below, is pictured in a beautiful way.

Miss Anna Scott contributed a number of pleasing pictures. Her "Sylvan Days," to which the judges awarded first prize, being one of the most beautiful things in the room. It is a gum print, depicting the nude figures of two young girls, tracing their way among some huge rocks, down toward a pool which shows in the lower part of the picture. It is an ideal composition, well handled. Miss Scott exhibited a number of other prints, all of high merit.

"At Monnickenden," by Edward W. Keck, which was awarded second prize, is a reddish brown gum-print, an evening picture of a number of boats lying alongside of a pier. It is one of the most satisfactory evening pictures we have seen, a quiet sky against which the masts of the boats and the buildings on the pier show in a way that is very suggestive of the time. Mr. Keck exhibited a number of other good things, most of them being foreign subjects.

W. W. Bissell, H. H. Kingston, Jr., R. S. Paddock, Miss M. B. Penfield, W. H. Shaffer, Irwin Taylor, and others exhibited good work.

Miss Frances B. Johnston, of Washington, sent a loan exhibit of five prints, and the Photo Secession of New York an interesting collection of about twenty prints which attracted much attention.

The Thirteenth Annual Convention, Photographers' Association of Iowa, will meet May 19–22, at Des Moines.

Never before has there been so much interest manifested among the members of this Association. There will be no prizes given this year, but a beautiful engraved certificate of rating will be given each photographer making an exhibit. The only prize offered by the Association is a magnificent bronze pitcher. This will be awarded to any photographer outside of Iowa having the best six portraits, nine inches or larger, on exhibition.

Application to enter the grand portrait class should be made to Secretary Townsend, Muscatine, not later than May 1, who will cheerfully give any information regarding the coming convention.

The Fill Trophy is creating a great deal of interest among Iowa's leading photographers. Circulars have been sent to all, explaining conditions under which this prize will be awarded.

The program for the dates set promises to be one of the finest educators and entertainers ever given to photographers in State Conventions, beginning with field sports and ending with a lecture by the secretary, of P. A. of America, Geo. G. Holliway, on the subject, "Good Derived from Attending Conventions." Prof. Felix Raymen, of the Illinois College of Photography, will be present and give an interesting lecture and practica demonstration under a skylight. A demonstration in flash-light photography and a photo of the convention will be made by L. G. Bigelow. These attractions will be of enough interest to draw a large attendance, without mentioning demonstrations in lighting, posing, bromide printing, platino toning, velox developing, etc.

Among the prominent Iowa photographers who will have complimentary exhibit, we have the names of the following: Brandt, Davenport; Kadghin, Cedar Rapids; Evert, Burlington; Medler, Spencer; Edinger, Des Moines; Webster, Des Moines; Childs, Grinnell; Browning, Fairfield; Townsend, Iowa City; Townsend, Muscatine; Brown, Marshalltown; Pierce, Ottumwa; Starks, Sioux City; Reynolds, Washington; Dunsmore, Anita; Rovvers, Pella; Flint, Waterloo.

Our Selection of Illustrations

The Photo Era will endeavor to maintain a definite plan in regard to the selection of photographs for reproduction in its future issues. Since it is our desire to present all that is best in modern photography, only the most excellent and notable examples of the art will be presented. In this way we hope to make the new Photo Era of greater educational value than ever to the amateur and professional photographer.

We aim to use for our frontispiece each month the best piece of work submitted for publication, from an all-round standpoint; the subjects reproduced in the body of the book are intended to be equally divided between examples of portraiture, landscape, genre work, and general photography, except in special numbers. As we propose to use better engravings, better paper, better ink, and greater skill in the reproducing of these pictures, only those of marked excellence will be shown. Thus, it will be seen that our frontispieces will really constitute a certificate of excellence, while each of the other photographs accepted will have been passed on favorably by our art department, and we hope to make it an honor, not to be lightly held, to have work accepted for the Photo Era.

We invite every amateur and professional worker in the art to enter this monthly competition. Each and every one should strive to excel in the special class submitted. Merit will be the basis of our selection, and the work of the humblest, as well as that of the expert photographer, will receive our most careful consideration.

In order that photographs may be submitted in time for their proper classification, we give below a list of subjects and the months in which they will be reproduced. Photographs intended for publication should be sent to us at least sixty days before the first of the month for which they are intended.

All photographs intended for reproduction should be accompanied, if possible, by a bright silver print, for use of the engraver. Much better results can be obtained from this class of copy, although the regular print should also be sent, in order that we may as nearly as possible reproduce the same effect in the half-tone.

The title of the picture and the artist's name should appear together, when practicable, the name and series of the lens used, size of stop, time of exposure, and the developer used, as all these facts greatly interest the readers of the Photo Era.

In order that the mechanical and artistic excellence of the photo-engraver may receive due credit, we have decided to give the name of each under the illustration they produce.

Engravers anxious to exhibit examples of their work will be accorded every opportunity.

Our future subjects will be as follows:—

June — Illustrations of Child Life.

July — Portraits and Historical Views; especially those relating to the Revolutionary War.

August — Seashore and Marine Views.

September — Portraits and Mountain Views.

October — The Photographic Art in Philadelphia.

November — Portraits and Harvest and Hunting Views.

December — The Photographic Art in New York.

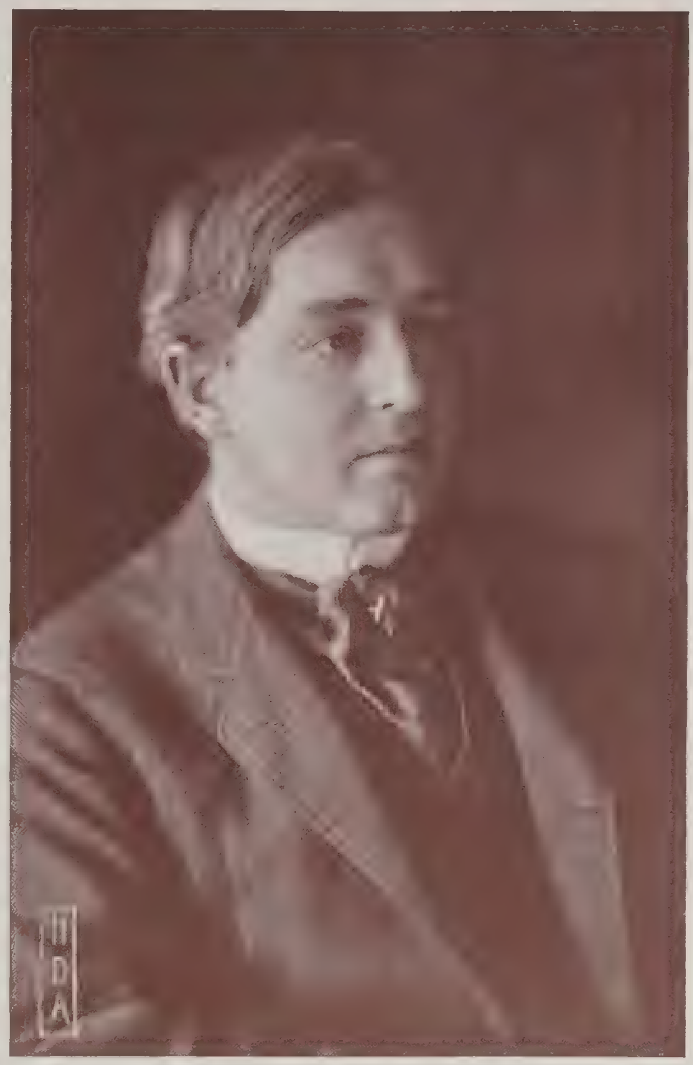
1904.

January — Prize Winners in Photo Era Competition.

February — Portraits and Winter Life.

March — The Photographic Art in St. Louis.

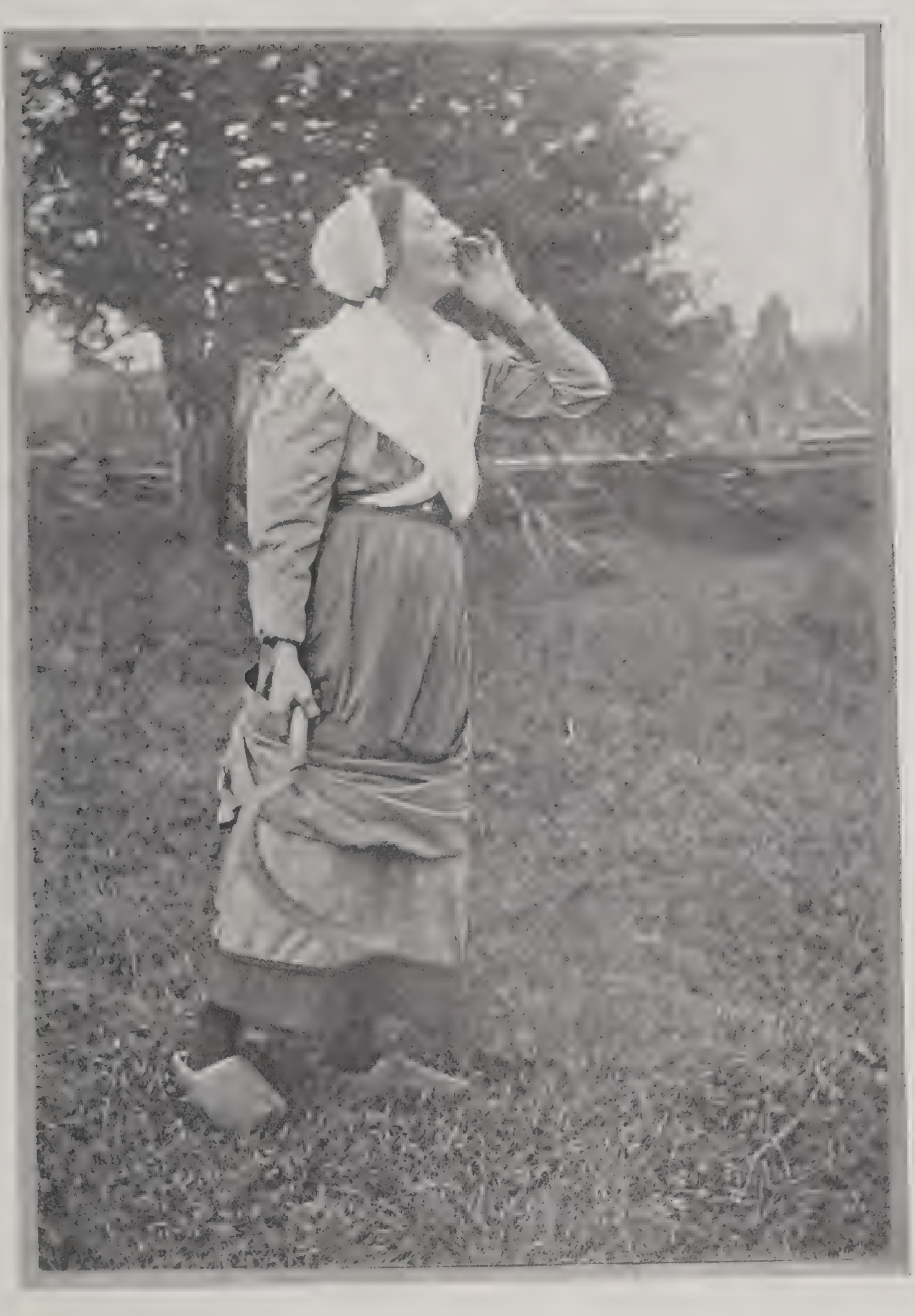
April — Portraits — Rainy Day and Night Views.



DAY-BAKER
By HOWARD DAY AIKEN

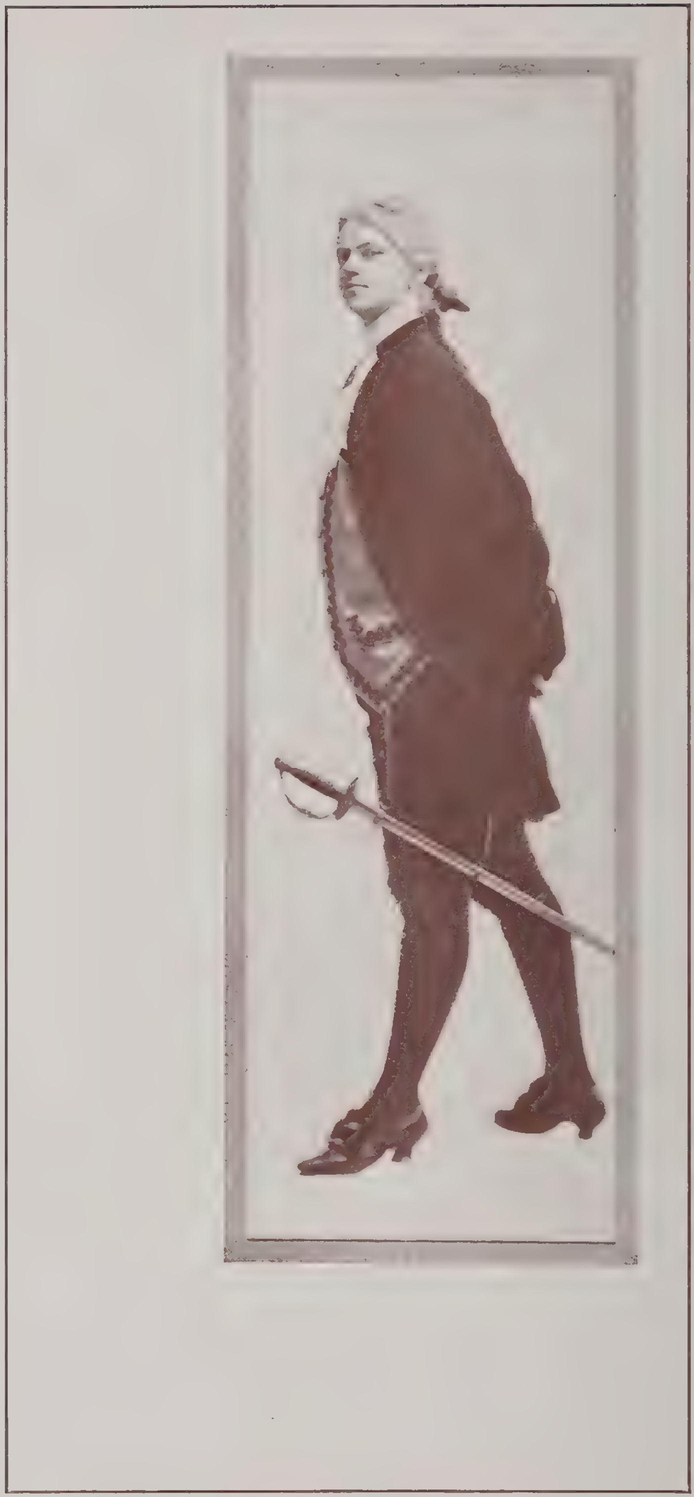
PHOTO
ERA

CLOUDS
By S I CARPENTER



THE GLEANER
By JAMES E TAGGART

PHOTO ERA



A COLLEGE SOLDIER
By G L ABELL

Correspondence

To the Editor of Photo Era:

My dear Sir, — In the first number of "Camera Work," page 37, is a comment on "Pictorial Photography: The St. Louis Exhibition," over the signature, Editor (Alfred Stieglitz). In part, this comment reads: "Pictorial Photography, having at last won recognition in recent European Art Exhibitions, the managers of the St. Louis Exhibition have awakened to the fact that they could no longer ignore its claims, although, 'until Mr. Caffin, the art critic and editor of the American Section of the International Studio, took up the cudgels for the cause, the authorities in St. Louis seemed bent upon following the old narrow path.' Nor were they entirely unjustified in their conservatism in view of . . . . 'the more than extravagant demands made by Mr. Julius C. Strauss' . . . . 'who presumed to act as spokesman for the photographic pictorialists' . . . . but his (Strauss') connection with the modern pictorial movement 'has hardly been such as to have given him the knowledge and experience necessary to impress the authorities with the history and consequent rights of photography as a fine art.'"

I have quoted the portions of this comment to which I take exception. My reasons for challenging the statements are: (1), the St. Louis Exposition Authorities had decided upon allowing a Salon Exhibit in the Fine Arts Palace before Mr. Caffin's article in the International Studio appeared; (2), I did not presume to speak for "Photographic Pictorialists," or any other kind of camera workers — but was one of a committee delegated to secure recognition for photography as an art, from our World's Fair officials; (3), that the demands made by our committee, designated by Mr. Stieglitz as "more than extravagant," were not so considered by our exposition authorities, nor so regarded by the photographic organizations of the world; (4), that the reflections upon my personal "connection with the modern pictorial movement, etc.," were intended not only as a very severe blow at me, but at all professional and nearly all amateur photographers; and (5), that the Camera Club of New York City, of which Mr. Alfred Stieglitz was at that time a prominent member and leading spirit, favored all the demands made by the committee, of which I was chairman.

I wrote Mr. Stieglitz a letter covering these points. His reply, in the current number of "Camera Work," on page 51, begs the question, by saying that in his previous editorial comment he referred only to "photographic 'pictorialists'" (the single quotation are his), and calls attention to the "distinction between such, and photographers generally." In other words, the display at the St. Louis Universal Exposition, it seems, according to Messrs. Caffin and Stieglitz, should be confined to the work of "photographic 'pictorialists,'" and they themselves should be the judges to decide which of their own productions should be displayed.

If you, Mr. Editor, feel that the professonial and amateur photographers of the world, not included in Mr. Stieglitz's roster of "pictorialists," have any claims upon the attention of the public, it would be well for your journal to take up the cudgel in their behalf.

In order that you may judge of the merits or demerits of my letter to Mr. Stieglitz, I enclose a copy of same.

Very cordially yours,

St. Louis, April 9, 1903. J. C. Strauss.

Editor Photo Era:

It is an established fact that every movement having for its object the elevation and betterment of the people, either as a class or in general, is conceived, organized, and fostered, by a few enthusiastic individuals whose enthusiasm is born of an intense realization of present needs.

In every instance these individuals are the thinking people, and I would urgently ask those members of the photographic fraternity who do not recognize in the conventions of the Photographic Association of America a need to the craft as a means of giving to its members all incalculable assistance otherwise unobtainable, to stop with me for a moment and "think."

Art, science, literature, and, in fact, all mental achievements are evolutionary, each generation adding to the structures builded by its predecessors.

This, my fellow craftsman, is, to a limited degree, your situation, for no one man is capable of evolving within a goodly lifetime scarce a fractional part of the remarkable phases of pictorial photography that will be shown in the superb exhibit of work at our next convention, which, with the presentation of important, pertinent subjects by able and entertaining authorities, and a brilliant interchange of ideas on the part of wide-awake, ambitious students of the art, would give you food for thought, a fund of information and a surcharge of enthusiasm that would last you through the year, the effect of which, on your business, could not be else than most salutary.

Aside from the pleasures of the convention proper, I would briefly add that this feature of the affair will be in the hands of those who are princes at entertaining.

I, therefore, appeal to you, in the name of the craft, to come to our aid and "help" us in our commendable efforts to elevate the photographic art of America, and to better the condition of the photographic fraternity promising you that by thus "helping" us, none will be more greatly "helped" than yourself.

Yours for fun and other things,

J. E. Giffin.

PHOTO ERA
The American Journal of Photography

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ADVERTISING RATES ON APPLICATION

Vol. X MAY, 1903 No. 5

Photography in Schools

To our mind there is no way in which the artistic temperament of a child can more readily be brought out than by the encouraging of drawing, sketching, or photography, during the school term, and offering prizes for excellence in same.

Such competitions are held by many schools and colleges, and the results have proved of great value to the students in general, as well as to those who submit works of their art.

The Penn Charter School, of Philadelphia, one of the oldest and best schools for boys in this country, has just held such a competition. The results obtained were far beyond the expectations of the teachers. Many excellent and interesting photographs were presented by the boys, whose ages range from twelve to sixteen years.

The first prize was awarded to Master Howard Day Aiken for portrait work. It might also be mentioned that he won the highest award for a photograph, last year, in a similar contest. Four examples of this child's work were published in the Photo Era of February, of this year, and later the *Sunday Press*, of Philadelphia, devoted a whole page to his clever work.

In addition to taking the first prize, the alumni of Penn Charter School awarded the monthly prize for March to Master Aiken for his excellent photographic work.

The second prize was awarded to Maurice Fleisher, for a very interesting canal view in Venice, which we expect to reproduce in our August issue.

The third prize was won by A. B. Johnson, Jr., for a picture of child-life in Mexico. This photograph we shall publish among the pictures of child-life in June.

It is worthy of notice that young Fleisher never attempted photography until about a year ago, when, spurred on by the results obtained by the other boys, he purchased a camera and started to hunt up the interesting and artistic pictures that are every day presented.

After seeing the results obtained by these young students, we can but ask, "Will not photography be of great value in influencing, perhaps even in shaping, the course of these young men's careers?" Who can foretell the results? Therefore, we say, "Encourage photographic competitions among school children; they are sure to bring out all that is good, artistic, and inspiring in them."

Our Illustrations

The readers of the Photo Era will notice that this month we are presenting our illustrations on separate pages from the text. We have done this in order that the true value of each photograph may be had, without the eye being diverted by the text.

We believe that this feature will be appreciated by every reader and lover of photographs. We would be pleased to have expressions from our readers as to this method of illustration.

This month we reproduce and call attention especially to the following photographs: —

Portrait of Miss Chase, by Garo, Boston. This frontispiece was reproduced from a 14 x 17 platinum print. It is considered one of the best of Garo's pictures.

Portrait of Mrs. Joseph Jefferson, Jr., by Garo, Boston. Reproduced from a 14 x 17 platinum print.

Portrait of Joseph Jefferson, by Garo, Boston. Reproduced from an 8 x 10 sepia platinum print. This picture Mr. Jefferson considers the best of his latest photographs.

Portrait of Lady, in oval, by Garo, Boston. Reproduced from an 8 x 10 platinum print.

Portrait of Mrs. Kitson, by Garo, Boston. Reproduced from an 8 x 10 platinum print.

President Roosevelt The outing of the President, during this month, in the Yellowstone Park, and his announced purpose to hunt with the camera instead of with the gun will endear him anew to many thousands of his American fellow citizens.

"For two reasons we assume that the reports about Mr. Roosevelt's hunting program refer to the pursuit of living creatures with a camera, rather than with a rifle or double-barreled shotgun," says the New York *Sun.*

"The first is that he is too good a sportsman to select as the field of his hunting exploits territory where the game has been taught to regard man as its friend, not its enemy. Tame birds, tame deer, half-tame carnivora are not targets that appeal to Mr. Roosevelt. He might almost as soon be expected to go a shooting in a zoological garden.

"The second reason is that the Act of May 7, 1894, 'To protect the birds and animals in Yellowstone National Park, and to punish crimes in said park, and for other purposes,' applies just as much to the President as to any other citizen. It is one of the laws which he has sworn to execute faithfully. He is not going to violate it in his own person for the sake of a few feathered or furred trophies of the hunt.

"*On this occasion, for rifle, read camera; for gunpowder, read dry plates or film cartridges; for shot, read snap-shot; for explosion, read exposure.*

"The circumstance that the President's chosen companion in the Yellowstone Park is the gentle-hearted Mr. John Burroughs, so much more of a naturalist than of a Nimrod, strengthens the belief that the vocabulary of the present trip needs this correction."

The PHOTO ERA takes a special interest in this outing of our Chief Magistrate, not only because of the President's conversion to camera work, the real sport of life, but also on account of his chosen companions, John Burroughs and his son, Julian, both of whom are contributors to the pages of the PHOTO ERA.

Three-Color Photography "The exhibition of Dr. Miethe's three-color photographs, which is now being held in Berlin," says the *British Journal,* "has elicited an article from Dr. Carl Kaiserling on the present position of Ives' three-color process, which appears in the *Photographische Mitteilungen.* Notwithstanding the fact that Lipmann's is a direct method, giving very beautiful results, the inconveniences are so great that it has to give way to the indirect methods for commercial purposes. Among the indirect methods the struggle appears to lie between the Joly and Ives processes. Slight improvements in detail give first one and then the other the advantage, but at present there can be no doubt that Ives' process is first favorite in the public estimation. Dr. Kaiserling points out that Dr. Miethe's claim, strictly speaking, must be limited to an improvement in the color sensitiveness of the plate by the use of ethyl-red. This sensitiser appears to be the best hitherto used for the production of a panchromatic plate, and it is spoken of by Dr. Eder in very high terms. Dr. Miethe, perhaps with the enthusiasm of a discoverer, thinks the new sensitiser means finality for the process, as we scarcely need a better. But this was said six years ago of the Ives process, yet the struggle for first place has brought further improvements. Probably the next step will be the commercial introduction of a reliable, rapid panchromatic plate, sensitised with ethyl-red. Dr. Miethe's pictures are being very effectively exhibited by means of a lantern with three electric arc lamps of fifty amperes each. The condensers are protected by an intervening sheet of glass, and the light filters of colored water serve as a protection to the slides. Three rapid lenses identical in focus project the pictures upon the screen."

The World's Fair and Photo Secession We publish elsewhere in this issue the correspondence of Alfred Stieglitz, Fellow of the Photo Secession, and Mr. J. C. Strauss, of St. Louis, professional photographer relative to the proposed photographic exhibition at the World's Fair in 1904.

The matter is one of vital importance to the photographic fraternity at large, for the reason that on it depends the future standards of pictorial photography in this country, and it calls attention anew to the openly avowed purpose of the Photo Secessionists to hold up the interests of this vast country under the threat of a boycott.

Mr. Strauss, who is by common consent perhaps the leading professional photographer in the United States, declares that he does not care for a defense for himself in stating that the exhibition should be conducted on broad lines, and only asks for simple justice to the amateur and professional photographer generally. "I have no quarrel," he adds, "with the Photo Secession, but I do feel they should not be 'the whole show,' photographically, at our World's Fair. I hope some of their work will be displayed, but they should not be allowed to dictate who and what should be in the exhibition."

We believe this to be sound doctrine and good policy to pursue in the matter of a great enterprise like this one, which involves the photographic interests of the entire country.

The Photo Era has already pointed out the absurdity of allowing the Photo Secessionists, a mere handful of workers who represent nothing but their own ideas, to make this exhibition.

While we are willing to allow that some of their members stand at the head of the list of pictorial photographers, we are not willing to concede that they are the whole thing in photography; much less should we allow that their decision alone should be final in the selection of prints for exhibitions like the World's Fair.

While their standards may be all right, so far as their particular school is concerned, they should not be the sole arbiters of the choice of the prints, as this would limit the selection to a chosen few, and would be a serious handicap to the success of the exhibit as a whole.

We trust that this matter will be taken up and agitated by the photographic press in the near future, so that we may receive some light upon the subject.

Fraudulent Old Masters An article on this subject has recently appeared in the *Nineteenth Century* magazine, by Douglass Langton, entitled "The Real Cimabue." The substance of the article is that Cimabue, the distinguished Florentine painter, was not the father of Italian painting, that Giotto was not his pupil, and that the famous Rucella Madonna in the church of Sta. Maria Rovella, hitherto attributed to Cimabue, is probably the work of somebody else; that, in short, no work exists that can be attributed to Cimabue, with any degree of certainty.

The matter is of special interest at this time, when there is so much agitation over the report that certain museums in Paris have been victimized by clever swindlers, and that some of the art treasures they have recently purchased, at great cost, are but clever forgeries. It is alleged that one picture, for which sixteen thousand pounds was paid, was a spurious painting, while a number of pictures in the Spitzer collection were likewise only copies.

In the section of Egyptian antiquities at the Louvre, in Paris, is the tiara of Saitapharnes, for which also sixteen thousand pounds has been paid, because it was supposed to be an original. A Parisian artist has recently declared, on oath, before a magistrate, that this tiara was made by him, when employed in a factory at Montmartre, from a model that was supplied him, and that the price paid for it was four thousand and five hundred francs. He confirms this statement by declaring that he put certain private marks upon it, being suspicious of the destination of his work; and that, later on, he learned that the tiara had been offered for sale to the British Museum, where the fraud was discovered. This same artist also declares that there have existed in Paris regular manufactories for ancient mummies and sarcophagi, and that these were sent out to Egypt and afterward returned to France, duly authenticated. If this be true, it might be well to examine the contents of many of our art museums and our public and private collections, to discover, if possible, how many forgeries or imitations they may contain. All this, of course, is of interest to the photographer, and is proof again, if any were needed, of the necessity of photographing originals to prevent the public from being imposed upon in its purchase of works of art. A good photograph would preserve the original sufficiently well to prevent anything like an attempt to palm off a bogus for an original picture.

Railroad Photography and Gardening

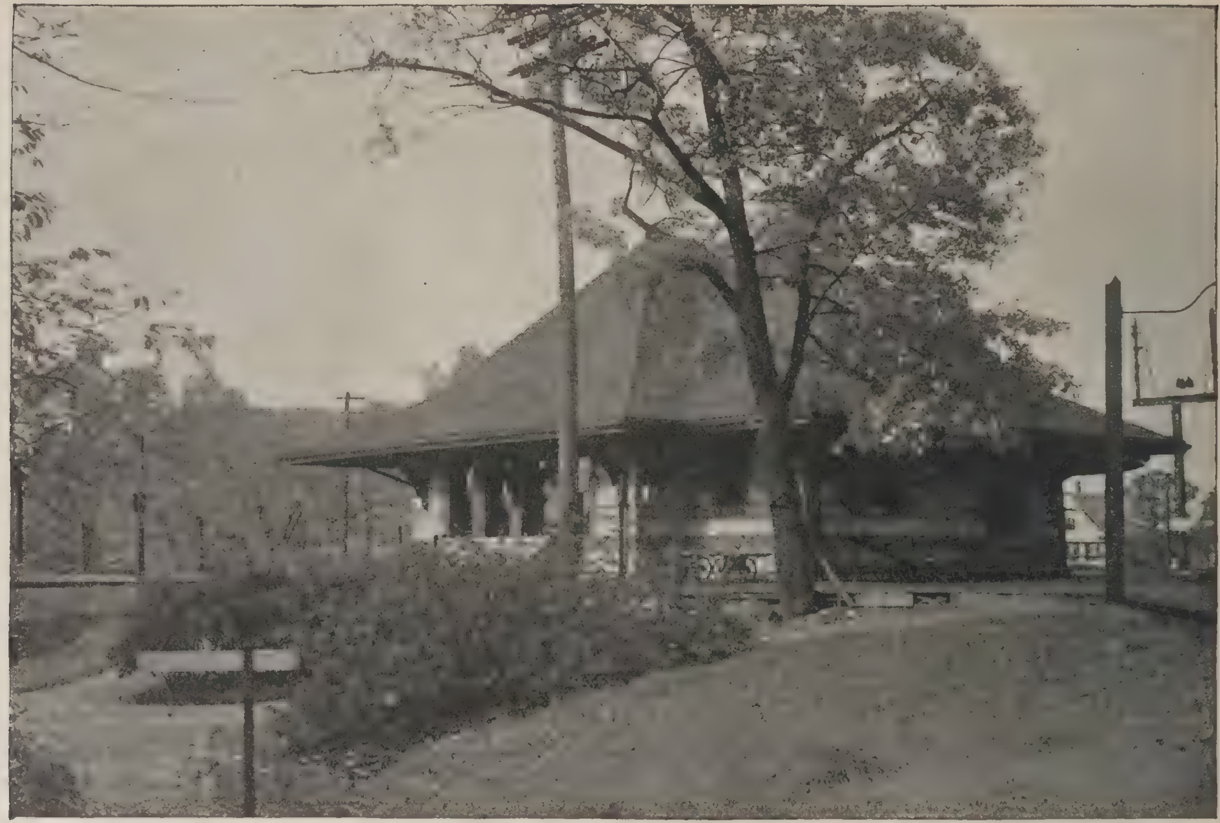
A HIDDEN TOOL-HOUSE Auburndale

RAILROAD photographs are more pictorial now than ever before. The reason is plain. Flowers are invading the domain of cinders, and the new movement to make railways beautiful is working a transformation along the lines of some of the more important American railroads. The value of the movement from an artistic point of view is obvious; and to many railroad officials such expense as was involved has seemed amply justified, in view of the added attractiveness of the towns which they served,—an attractiveness which they hoped might be a factor in bringing in residents and building up the permanent passenger traffic of the road.

The chief characteristics of the old-time station were pretty apt to be ugliness and untidiness, with only occasional attempts to make them neat and pleasant to look at. Here and there a station-agent tried to beautify his grounds according to a better taste, if only by the often primitive means of "carpet gardening," with flowers blooming geometrically in summer, and empty beds of dirt and cinders in winter; and here and there, also, the activities of a local improvement society were brought to bear on the problem. A comprehensive application of the idea, however, was developed in the early eighties by three Eastern roads, almost simultaneously,—the Pennsylvania, the Old Colony, and the Boston & Albany. Of these the Boston & Albany — now a part of the New York Central — offers in many ways the best example to be found anywhere of economically adapting simple means at hand to the necessities of a far-reaching and permanent scheme, an essential feature of which is the use of hardy native trees and shrubs in such a way that the station grounds shall be attractive not only in summer, but in the late autumn and even in winter.

The plan is intended in time to include the whole road, from terminus to terminus, and is now in nearly complete operation on what is called the Newton Circuit, which comprises a circle of suburban towns near Boston. The Circuit passes by twenty-one rural stations. At one point it touches the great Metropolitan park system of Boston, which has been called the most comprehensive system of public pleasure grounds in the world, and it connects a chain of suburban

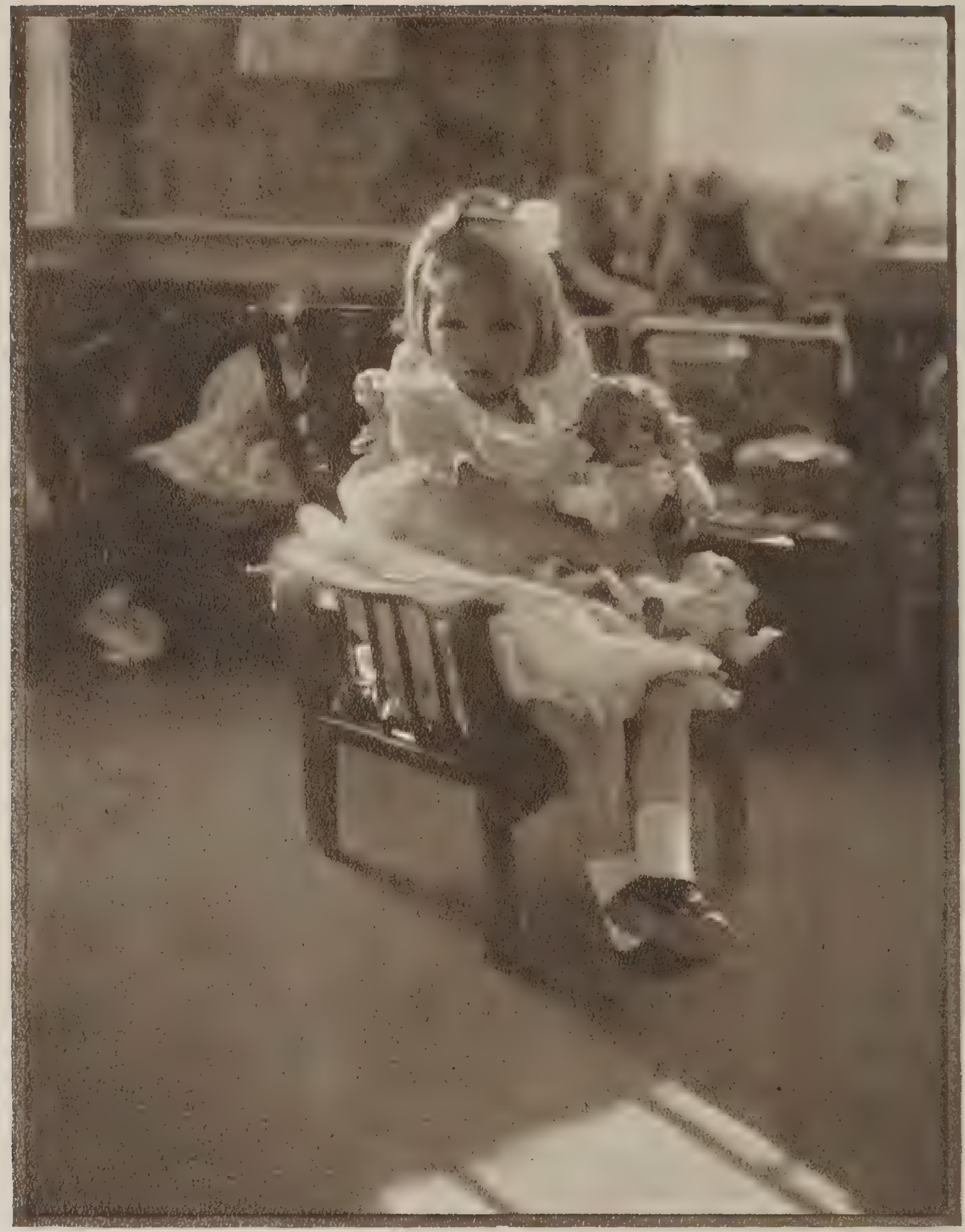
STATION, AUBURNDALE, MASS. B. & A. R. R.



RIVERSIDE STATION Boston & Albany R. R.

towns remarkable for beauty and orderliness. The situation was, therefore, in many ways ideal for the development of an out-door æsthetic problem. The road has been fortunate, too, in having the cooperation of the Arnold Arboretum, the Harvard tree museum, which is now incorporated in the park system of Boston proper. Prof. Charles S. Sargent, director of the Arnold Arboretum, was then — as he is now — a member of the Boston & Albany directorate, and naturally, therefore, one of the first men likely to be interested in the possibilities of a plan for beautiful railroad gardening, as well as one of the best fitted to assume the management of it. The first practical step toward better things, however, was taken by Mr. E. A. Richardson (some twenty years ago), baggage-master of the Newtonville station. Mr. Richardson had no expert training as a gardener, but he possessed the instinctive love of order that is the first principle of all good horticulture. The station at Newtonville was no worse than others on the line, but he was not satisfied until he had set himself to making it better. His first encouragement came from an assistant engineer of the road, who furnished him with loam and sods, and from a few of the more public-spirited of the Newtonville people. What he was able to accomplish attracted the attention of his Newtonville neighbors — as was inevitable at a time when railway stations were the dreariest of all public buildings — and was brought to the notice of Professor Sargent. The matter of improvement, not only at Newtonville, but along the whole line, was taken up and approved by the Albany directors, several of whom, it may be noted, were personally interested in horticulture as an art, and were the quicker to realize the usefulness of beautiful stations, especially at suburban points, in bringing residents to the towns in the territory of their road.

The photographs of the accompanying stations along the road, show the marked improvement over the old buildings and mark an epoch in the progress of railroad photography and gardening.



CHILD AND DOLL
By MATHILDE WEIL

PHOTO ERA
The American Journal of Photography

VOLUME X JUNE, 1903 NUMBER 6

Baby's Portrait

E. H. WASHBURN

> " Needles and pins, needles and pins,
> When a man marries his trouble begins."

SO goes the old rhyme. Well, perhaps it is so, but he must be cold-hearted indeed, who, when the little ones arrive, and begin to grow, does not count the value of their presence as far overbalancing the trouble end of the account. Parental love, slowly but surely growing apace, transforms the baby into pure gold.

If papa be photographically inclined, he must surely have pictures of that baby, and, urged on by mamma and doting grandmamas, aunts, and friends, he proceeds to get them.

Let us consider briefly the thorns which beset his path.

In the first place there is the baby, who seldom makes a good subject under three months old, as he cannot hold up his head, or face the strong glare of light which is necessary for the brief exposure which must be given.

Then the camera. It should be preferably a focusing one using glass plates, and ought to be equipped with a rectilinear lens working not slower than F. 8., or U. S. No. 4. If papa can afford a rapid anastigmat, it will, of course, increase the chances of good results, as the exposure indoors cannot as a rule be longer than one half second on account of baby's rapid motions.

With practice, however, the ordinary rectilinear lenses, furnished with the popular folding cameras now on the market, can be made to produce first-class results under good conditions. The shutter should be as noiseless as possible. The automatic kind now furnished makes less noise than those of older design.

The question of lighting is one which I need not say much about. I would say principally, get all the light you can; you will need it. I have taken a large number of baby pictures by the light of a big, bay window on the second floor of the house, and found it excellent for the purpose. If there be no bay window, use the one which lets in the most light; direct from the sky, if possible.

Put baby in such a position that the light falls on his face a little on the side. Don't allow any to come from behind, as it makes the face look chalky on the light side. A sheet, thrown over a clothes-horse or the back of a large chair so that it hangs down close to the floor, makes a good enough reflector to soften the shadow side of the face.

When ready the position of the paraphernalia may be something like diagram on the next page: A, B, and C being the windows. The camera is represented by X, and the baby as O. R is the reflector.

I almost always pull down the curtain at C as I have plenty of light and like the results better, for the reason forementioned.

Let us now begin the arduous task, with half a dozen of the fastest plates obtainable. Do not try to take more than six exposures at one time; four will probably be all that baby can stand before tiring out, and you will also find yourself fatigued, after making four, unless things go unusually smooth.

Decide where the baby is to be placed and moderate powers and cameras of short bellows the f″ should be about two thirds that of f′. For example, with a positive lens of seven-inch focus and a bellows of twelve-inches extension, the negative lens might well be of five-inch focus. For higher powers and longer bellows the best f″ is about half that of the positive.

2. What is the necessary separation between the positive and negative lenses? This is a variable. The minimum is equal to the difference of their focal lengths (f′ minus f″). The maximum is equal to f′. Between these limits the separation depends upon the degree of magnification. The formula is,

$$s = f'' + \frac{f''}{m}.$$

3. What length of bellows is required to give a desired magnification? The answer is in the next formula,

$$b = f'' (m-1).$$

For example, to magnify four diameters with a negative lens of three-inch focus, we get

$$b = 3\ (4-1) = 9 \text{ inch length of bellows.}$$

4. What is the magnification possible with any given length of bellows? In this case the formula is

$$m = \frac{b}{f''} + 1.$$

For example, with a negative lens of f″ equal to three inches, and a bellows extension of twelve inches, what enlargement can be secured?

$$m = \frac{12}{3} + 1 = 5 \text{ diameters.}$$

5. What size plate can be covered with any combination at any bellows extension?

$$d = \frac{b}{f''} \left\{ \frac{a'\ f'' + a''\ f'}{f' - f''} \right\}.$$

For example, with a positive lens of seven-inch focus and one-inch aperture, and a negative lens of three-inch focus and also one-inch aperture, and a bellows length of twelve inches, what is the diagonal of the plate covered?

$$d = \frac{12}{3} \left\{ \frac{1 \times 3 + 1 \times 7}{7-3} \right\} = 4 \left\{ \frac{10}{4} \right\} = 10 \text{ inches.}$$

This is obviously ample allowance for a 5 x 7 plate.

6. What is the increase of exposure in any case? Theoretically the exposure should vary as the square of the magnification. This is said to be not exactly true because of atmospheric reflection when working with distant objects. The writer is inclined to believe that this variation is sometimes overstated, as distant objects require a shortened exposure whatever style of objective is used. The rule is, ascertain the correct exposure in the case at hand for the positive used alone, multiply this figure by the square of the magnification; $t = m$ times exposure for positive lens alone.

Attention should be called to the caution that the diaphragm multiplied by the magnification should not exceed seventy. For example, to magnify five diameters, what is the smallest diaphragm permissible?

$$\frac{70}{5} = 14 \text{ hence f.14 is the limit in this case.}$$

With these formulæ it is confidently believed that the amateur can readily solve all the problems arising in the construction and employment of his telephoto combination.

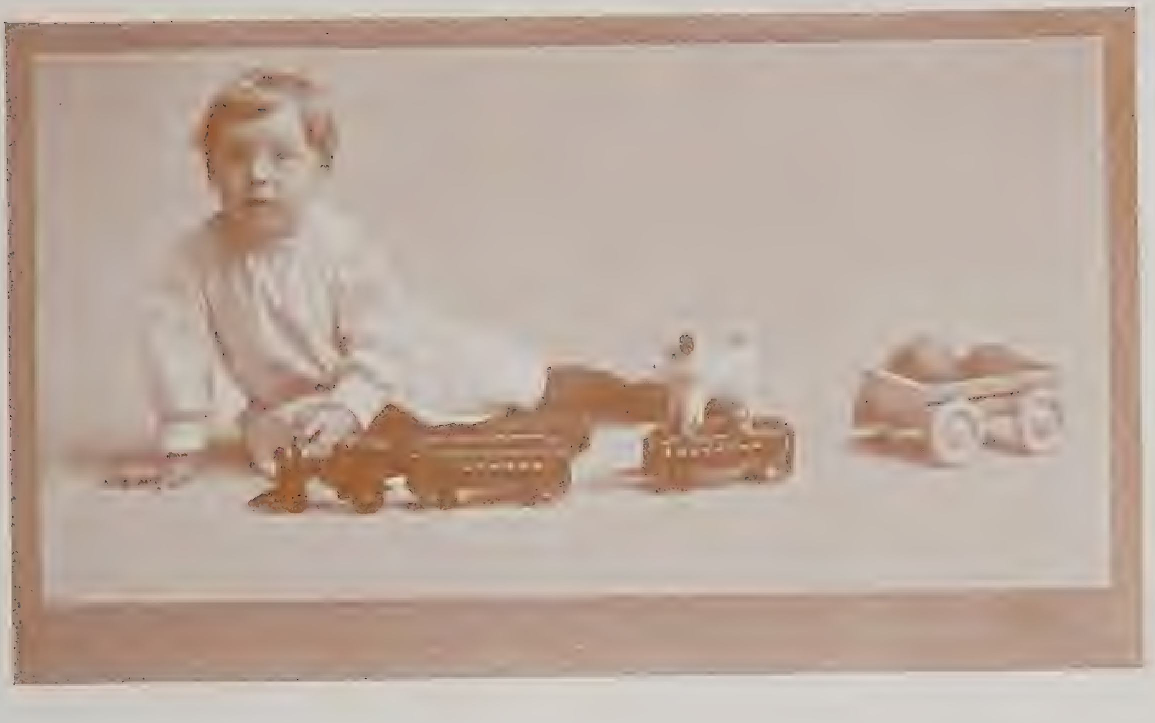
CAT'S CRADLE
By E G MERRILL

DURHAM
By BERTHA HOWELL

PHOTO ERA

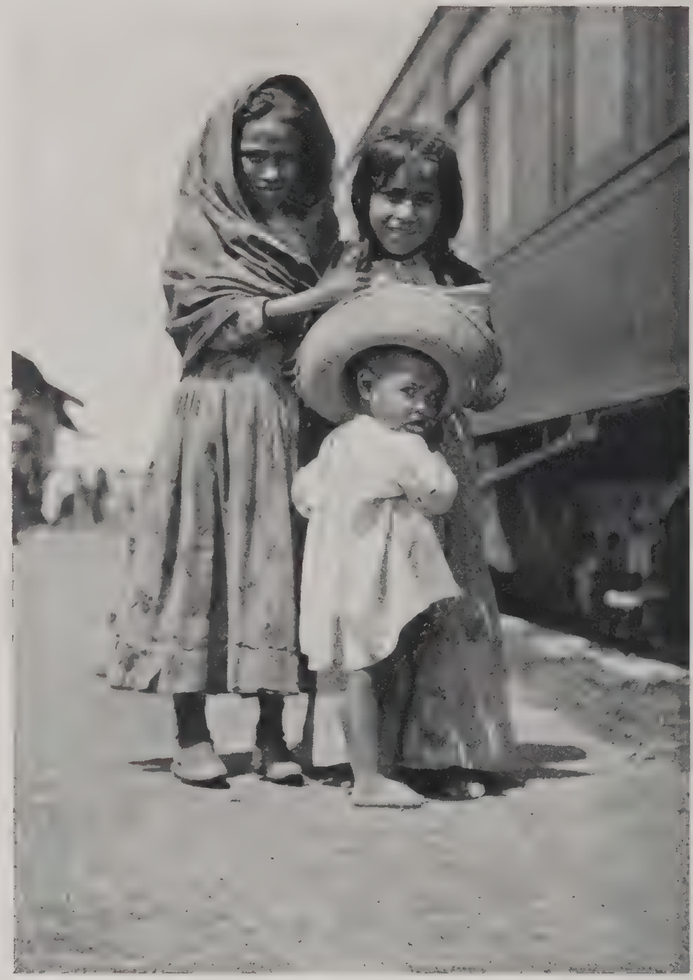
MISS BRIGHT–EYES
BY MARY CARNELL

IDLING
By HENRY HALL



THE NURSERY "CHOO-CHOO"
By W A GULICK
Notman Studio Cambridge

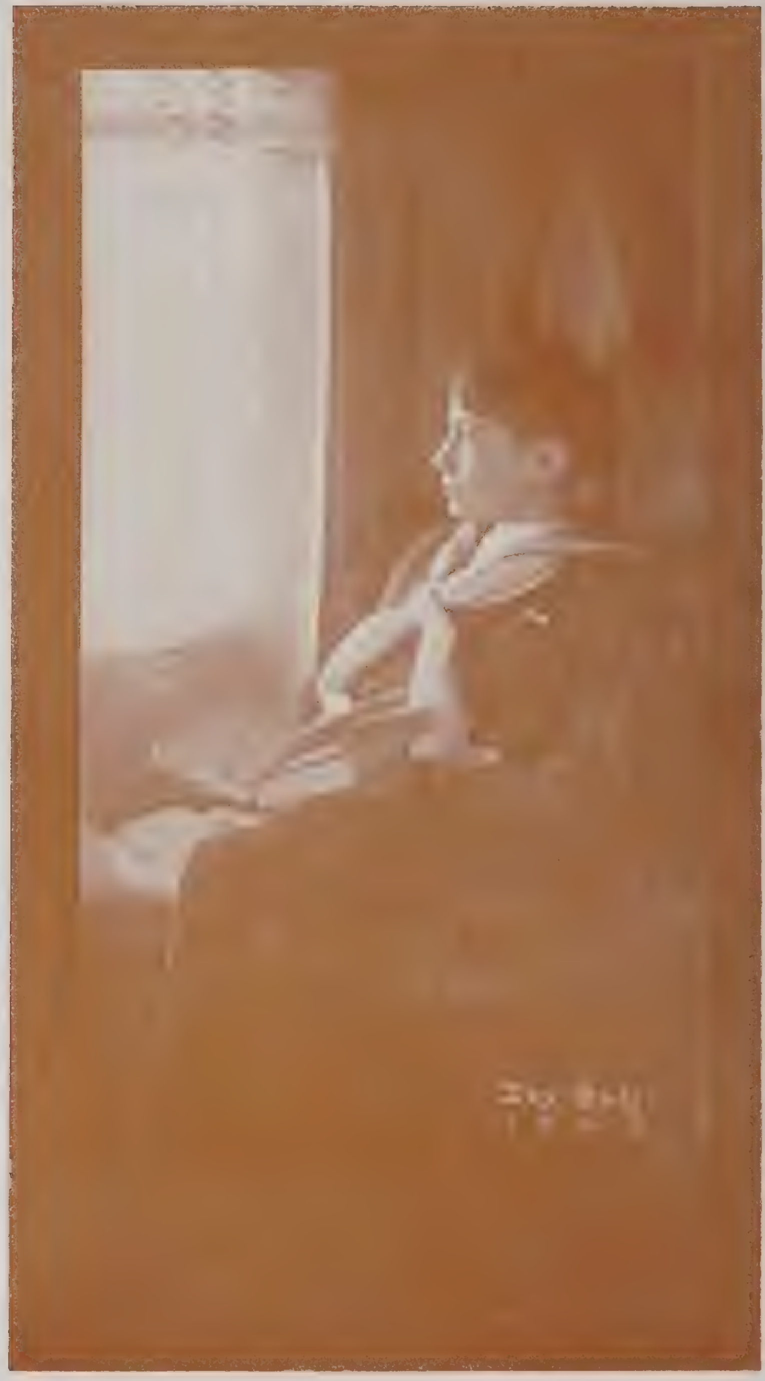
PHOTO
ERA



CHILD–LIFE IN MEXICO
By A B JOHNSON JR

PHOTO ERA

BUBBLES
By E H WASHBURN



PORTRAIT HOWARD DAY AIKEN
By DAY-BAKER

PHOTO ERA

In Memoriam—Howard Day Aiken

DURING the past month there died, in Philadelphia, a sweet-faced boy, a mere child in point of years, yet possessed of a soul full grown and filled with artistic thoughts and ideals. Howard Day Aiken was made of the finer clay, and, although only fourteen years old at the time of his death, he had aspirations and dreams of which the imaginations of other boys of his age never could conceive. With unerring instinct he saw the beautiful and good and true in the world, and he saw them with a clear vision.

By means of his camera, he was able to convey to others his ideas of sweet child-life. The PHOTO ERA for February, 1903, contained a brief description of his photographic efforts, illustrated by a few examples of his portraits. His work was of the better class; the posing, lighting, and chemical manipulation being of a high order.

At the request of the committee of L'Effort Society of Photographic Art, Brussels, a number of young Aiken's pictures will be exhibited this month at their third International Exhibition.

The Philadelphia "Press," in commenting upon his pictures, said that they rivalled those of expert photographers.

One of Boston's famous workers in the art—one whose name is well known in this country and abroad—said: "The fingers of one hand would be sufficient to enumerate the photographers in any large city, who from all points, could equal young Aiken's work." And we confidently predicted, if fate were kind to him, great things in the future. But the Angel of Death gently called, and with a sweet smile he answered, and his life went out in the bloom of youth, without complete fulfilment of his great promise. We cannot understand the reason why, we only know what is.

To those who have been so fortunate as to know this sweet child-artist, his face, his life, and his work, will always be an inspiration.

The photographic world has met with a loss in the death of Howard Day Aiken, for, had he lived, his work would have been a credit to the art and a joy to all permitted to see it.

"Do we call the star lost that is hidden
In the great light of morn?
Or fashion a shroud for the young child
In the day it is born?
Yet, behold, this were wise to their folly
Who mourn sore distressed
When a soul that is summoned, believing,
Enters into its rest."

—Carey

Botanical Photography

JOHN BOYD

THERE is a broad field open to the enthusiastic cameraist, whose inclinations lead him into the realms of nature, be it either as a specialist in scientific photography, or simply as an admirer of the beautiful things planted everywhere for those who love the green-carpeted earth and its dome of azure blue.

Not the least interesting of these is the plant kingdom, and no matter whether one delves into the ground itself after the tiny flowers of the trailing arbutus, or is comfortably picturing the snowy masses of a crab-apple tree in full blossom — the pleasures are the same.

Our magazine writers, I am sorry to say, seem to specialize on the wild flowers only when grouped "artistically" in a vase or bowl; planted in front of a suitable background, and lighted by screens and reflectors, forgetting that old Dame Nature can furnish more suitable backgrounds and settings for each of her children than man can ever hope to approach. I am not going to decry these vase studies altogether, they are all right if intended for a florist's catalog, and may even furnish good lessons in orthochromatic photography, but to my mind they lack the naturalness that we are accustomed to see surrounding these same flowers in their home haunts.

To go afield and picture our wild flowers as we find them is not a difficult task. There are no special appliances of absolute necessity, though of course some of the "conveniences" will help us along.

Let us take a ramble this afternoon, and see for ourselves. We have with us, say, a 5 x 7 view outfit, with a good lens, ray filter, ortho plates, and a strong, rigid tripod.

Our first "sitter" is the humble but beautiful milkweed, growing alongside the road. It has fortunately thrown up two stems — one with flowers partly expanded, the other with buds not so fully advanced. The tripod is set down as low as possible, and when we get the camera-box in place find that it is necessary to use the swing back to bring all parts in focus. This is arranged with the lens wide open (ours works at F. 6. 8.); we then set the diaphragm opening to F. 8, finding that this is sufficient to sharpen up all parts of our subject, and still leave the background out of focus. When this is done properly we may have said to have solved the principal trouble in botanical photography, and to the beginner I would urge hours of study with the ground glass in arriving at the point where he can have his subject stand out with an individuality that leaves no doubt to the observer of his work as to what was the principal object he was picturing. We add a light-ray screen, and, using a Cramer Inst. Iso. plate, give it three seconds' exposure.

Alongside of us and inside the fence is a beautiful piece of woods, and scattered here and there are some of the common pink daisies. These are swaying in the light wind, and we doubt our ability to catch them in the dull light, but they are tempting enough to warrant a trial. We proceed as before, setting the tripod just high enough to allow us to see the centers of some of the flowers on the focusing glass.

The camera being in readiness, the holder inserted, and the shutter set, we secure a couple of sticks, and with the aid of the focusing cloth and our coat build a wall around the windward side of our subject. This gives us a good shelter, and when the flower becomes perfectly still we make the exposure, fully believing that not a line is blurred. For this subject we leave the screen off.

The afternoon is now drawing to a close, and despite the fact that we have only exposed two plates, we feel that our time has been well spent. As we go homeward we linger long enough by the way to make notes of other plants whose surroundings are such as will give us negatives to enrich our collection in the days that are to come; and this knowledge of where a picture can be had is a strong incentive to careful planning, and in working out the details as to how it can best be done, when the time comes to make the exposure.

The developer for this class of work should be weak, so as to bring up the image soft and with graduated half-tones, and any of the formulas given by the maker of your plates will do when diluted.

Photo Secession and the World's Fair

HAROLD HUTCHINSON

WHAT is a secession? The dictionary says it is a withdrawal, a retirement, a seclusion; and further, the dictionary says a seclusion is a withdrawal from public observation. What then is a Photo-Secession? While it is impossible as yet fully to answer this latter question, since the Photo-Secession is more or less of a new species, and further study of its peculiarities is required before a scientific classification of it can be made, yet there is some evidence that it seeks to perpetuate in itself the atmosphere of its photographic works; in other words, to so surround the central object, itself, with a pseudo-haze as to excite the curiosity of the beholder as to what is really there. This excitation of the curiosity, or, if preferred, this awakening of the imagination, constitutes an exhibition of the spirit of true art on the part of him who is master enough to cause it. And yet what is it more than skilful advertising?

To advertising there can be no objection, but when the Photo-Secession assumes that it alone, and the photographs it approves, should be represented at a World's Fair, does it not overstep the bounds of the legitimate? The question of what branches of photography should be exhibited at the World's Fair in 1904, and whether demonstrations of its mechanical and artistic aspects should be placed in juxtaposition, may well be open to discussion; but who shall presume to dictate? If the exhibition of photography at St. Louis should be held in accord with the desires expressed in "Camera Work," would it constitute anything more than a first-class advertisement of a limited number of individuals? Where is the true spirit of Art? Is *it* not also a little out of focus?

If it did not have its serious aspect it would be highly ludicrous to watch the methods of this photographic trust. They bear themselves with such gravity, however, that it is sometimes a little hard to remember that their claims amount to this: Our photographs are the Only artistic; We alone can judge our photographs; Therefore, we alone should exhibit at St. Louis. Far be it from me to dispute their minor premise; it smacks too near the truth. Indeed, they alone can know what often hides behind the veil. But the conclusion of this solemn syllogism is what leads to both tears and laughter. Have they indeed cornered the market? It would almost seem so.

Their work is good in the main, this we all admit without cavil; but are they so sure of it? There is a continual fear exhibited that their photographs cannot stand on their own feet; that unless everything else is excluded, their work will somehow fail to be the whole show. And all this is salved with the special pleading that their photographs are above competition. This is rarely the spirit of him who feels sure wherein he walks. It leads one now and again to look for decay at the root; else why cry so loudly that it is not there?

"Methinks the lady doth protest too much."

Good as we all believe some of their work to be, much as we owe to them, both for what they have done and what they have stimulated others to do, the friendly feeling which photographers at large should have toward the Photo-Secession is tempered when they play the Pharisee. Where among them do we find an apostle to the Gentiles? And yet the truly great are not afraid to consort with publicans and sinners, to lead them up and on.

The true artist concerns himself with Art; the pseudo-artist and the artisan alike pursue the bubble reputation. It seems to me that he who has his work at heart cares more to do it well, in the prayerful hope that it will carry its truth and beauty irresistibly home to the soul of the observer, than he does whether some one else also has a chance or not to preach a little sermon of beauty and of truth. It seems to me that it is well to have a section for photographic art at St. Louis, whether this concession was obtained by Strauss or Caffin. It seems well that those of us who have a word to say to our fellow men, through the medium of our photographs, should do so. It seems a pity that any of us should be so hoggish as to be principally concerned in shutting the door in the face of some other earnest worker, whomsoever he may be.

The dry rot at the heart of the Photo-Secession is that old slogan, "the distinct evidence of individual — ". Mark you, not the distinct evidence of art, or the distinct evidence of anything else, save it be tempered by that "individual." The glorification of the individual is the aim. It matters not that the work is good, unless it contains distinct evidence of "Pickwick, or Nokes, or Stokes, or Stiles, or Brown, or Thompson." Praxiteles is known by his works; and his sculptures, so far as they show any evidence of Praxiteles other than their intrinsic beauty, are bad. It is always so; the individual is not the art, and cannot be. When the Photo-Secession forgets the individual for a time, when it takes up its trumpet to blow for art without a tag on it, then we shall see what they can really do. Meantime, I believe nobody will disturb them in their "withdrawal from public observation — " so long as they do not seek to occupy the *entire* stage.

In order that it may be understood that all this is said in a spirit of friendly good nature, I add,

"So 'ere's to you, Fuzzy-Wuzzy!"

The Novice

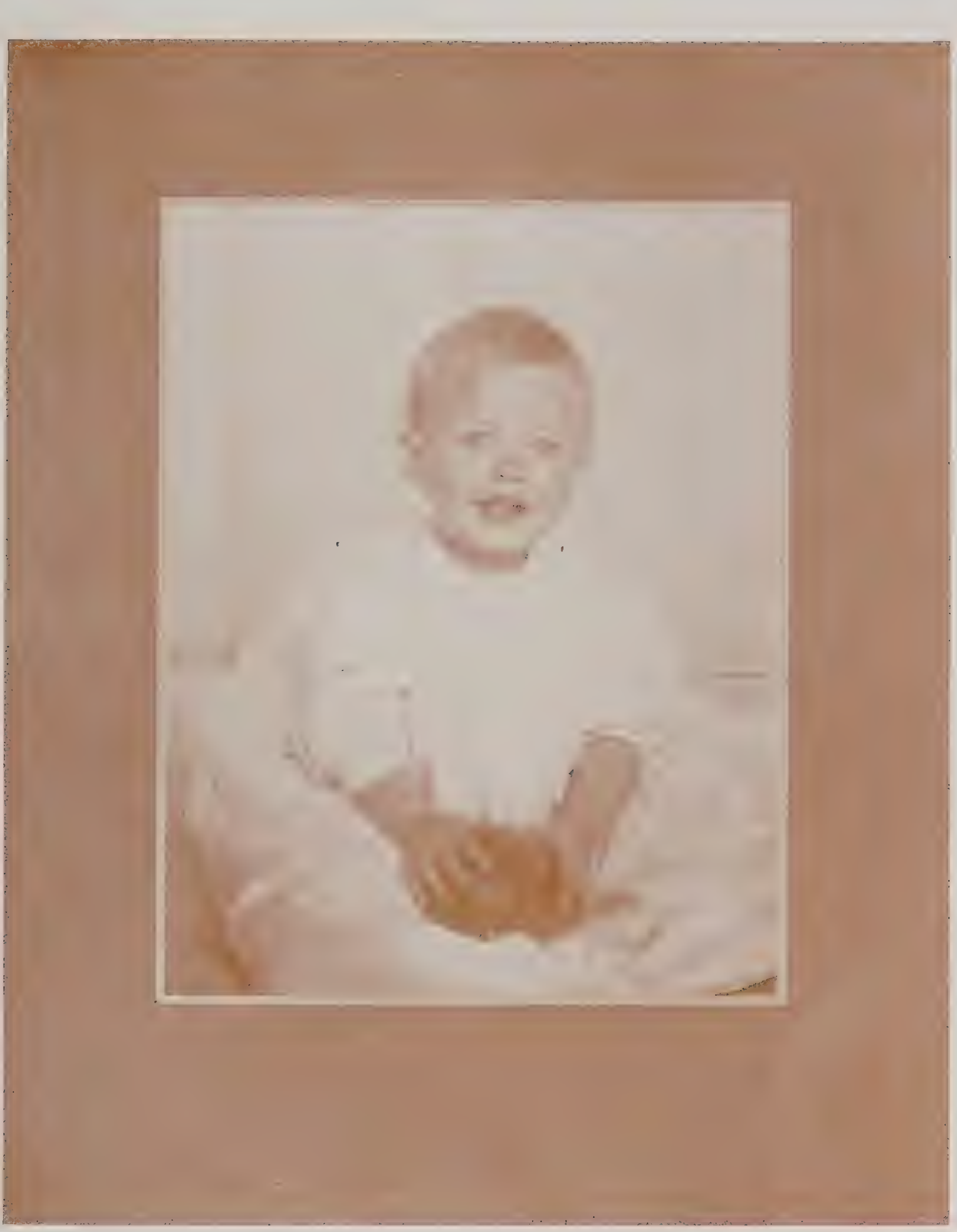
Written for the PHOTO ERA

Don't go near the mantel, darling,
  Papa's plates are there to dry;
Fie! you've nearly spilled the hypo,
  Take more care as you go by.

No, you cannot speak to papa,
  He is in the dark-room now;
Fuming, fretting, at his pastime,
  Like a farmer at the plough.

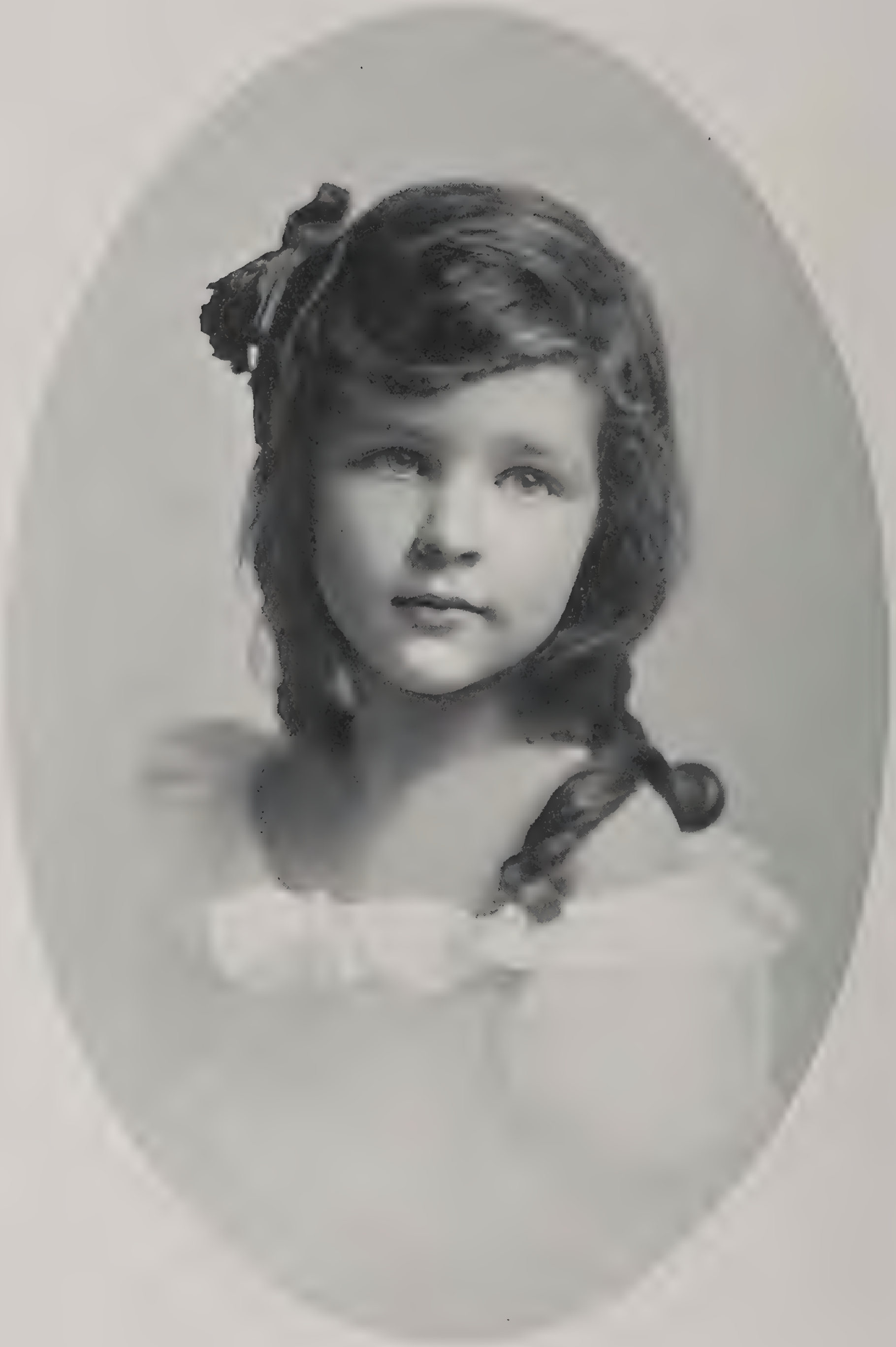
Hush! I think I hear him coming,
  What is that I heard him say?
"Darn it, I have spoiled that landscape!"
  Dear, you'd best run out to play.

— Lillian M. Ratcliffe



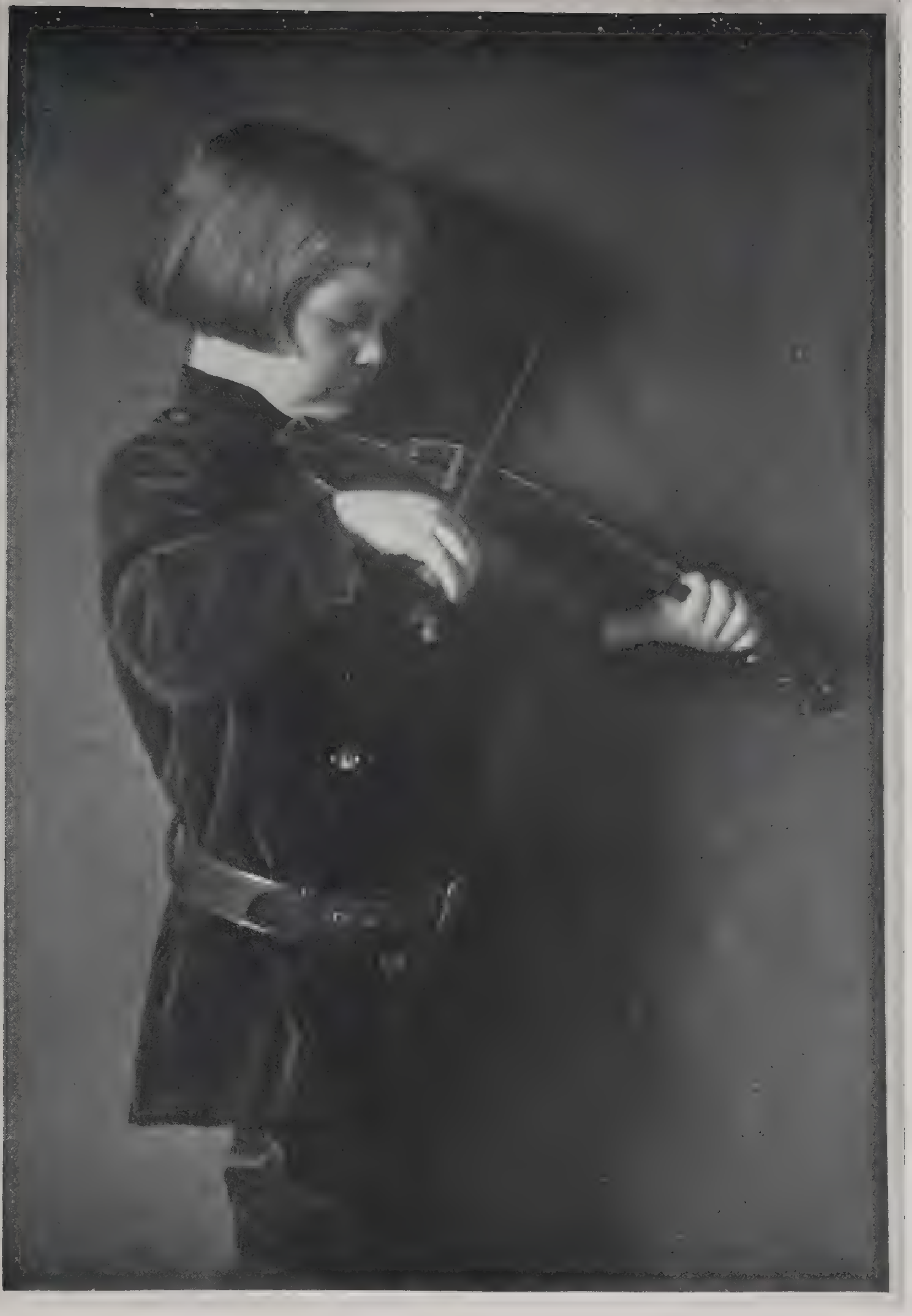
PORTRAIT OF A BABY
By ANNE PILSBURY

PHOTO ERA

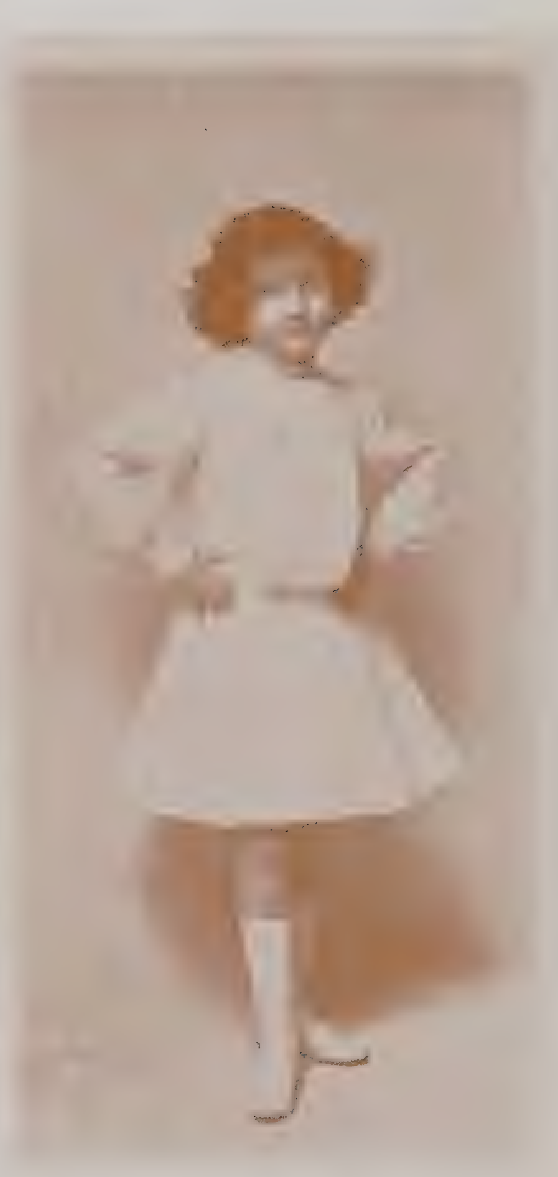


A DAUGHTER OF DREAMWOLD
Copyright 1902
By LITCHFIELD STUDIO
Arlington Mass

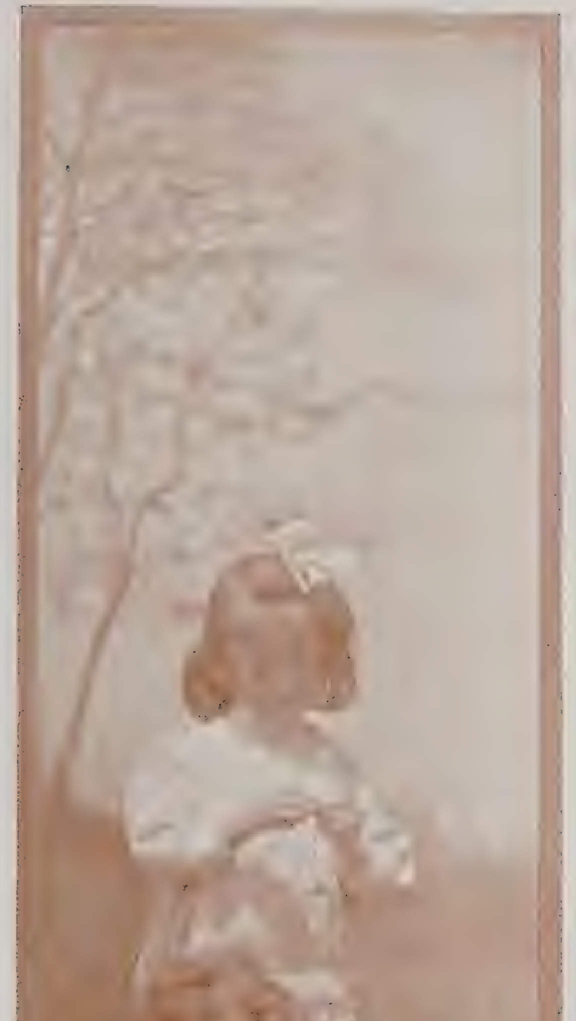
PHOTO
ERA



BOY AND VIOLIN
By ALICE AUSTIN



PORTRAIT
By the MISSES SELBY

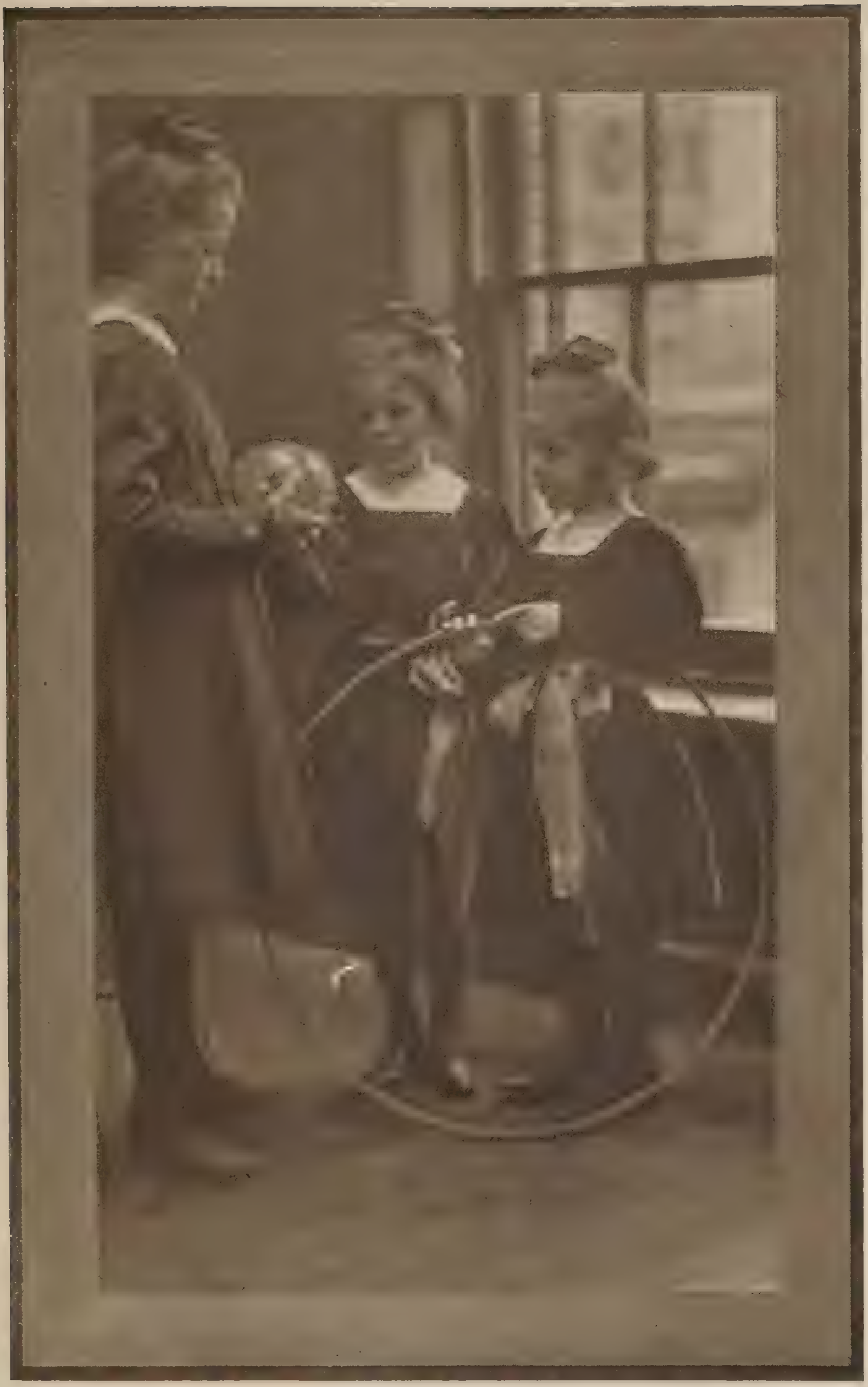


"The Maytime and the Junetime
rare with blossoms and perfume sweet."

—Wilcox

SPRING
By MATHILDE WEIL

TYPICAL AMERICAN BOY
By FREDERIC E von RAPP



PLAYMATES
By GERTRUDE KASEBIER

PHOTO
ERA

PORTRAIT
BY J C STRAUSS

PHOTO ERA

The American Journal of Photography

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ADVERTISING RATES ON APPLICATION

Vol. X JUNE, 1903 No. 6

June June is essentially the month of flowers. Leaves and blossoms are expanding, tender shoots are putting forth, and there is animation, beauty, promise, joy, everywhere in nature. The floating melodies of song-birds fill the air. After the death and seeming destruction of winter, it is the great miracle of life, nature thus annually renewing itself. The colors that dye the petals of the June rose, hyacinth, and carnation, the waxen whiteness of the lily, the delicate greens of the foliage, the birds and insects of the air, are all simply manifestations of the thrill of common life translated into these myriad forms. Their infinite variety of form and color, the ethereal tints of the clouds this month, often suggest a painting from the hands of the great Master Artist. It is a beauty divine that will only stir and awaken the soul of the true artist photographer who comes under its influence.

If you are reponsive, the soft, vernal blooms of spring will touch and dye your soul with their gentleness and beauty. They will make your pictures beautiful, because your lives will be more spiritual, trustful, and beautiful.

Nature Pictures Robert Louis Stevenson declares that the pleasure we take in pictures of nature is essentially capricious. It comes sometimes when we least expect it; so that we see it "with a child's first pleasure," as Wordsworth saw the daffodils by the lakeside. Some day, he adds, "you will find your first violet and then you will be lost in pleasant wonder, by what alchemy the cold earth of the clods, and the vapid air and rain can be transmuted into color so rich and odor so touchingly sweet."

Who can forget how when he has chanced upon some attitude of complete restfulness, the whole fashion of the landscape has been changed for him as though the sun had just broken forth, or a great artist had only then completed, by some cunning touch, the composition of the picture. And not only a change of posture — a snatch of perfume, the sudden singing of a bird, the freshness of some pulse of air from an invisible sea, the light shadow of a traveling cloud, the merest nothing that sends a little shiver along the most infinitesimal nerve of a man's body — not one of the least of these but has a hand, somehow, in the general effect, and brings some refinement of its own into the character of the pleasure we feel. We admire splendid views and great pictures; and yet, what is truly admirable is rather the mind within us that gathers together these scattered details for its delight, and makes out of certain colors, certain distributions of graduated light and darkness, that intelligible whole which alone we call a picture or a view.

Portraiture But grander than any June landscape and more beautiful than any June flowers are children, the human flowers, a bevy of whom we reproduce in this issue. Some great writer has said that "the human face is the masterpiece of God." "A woman's smile," he adds, "may have in it more sublimity than a sunset; more pathos than a battle-scarred landscape; more warmth than the sun's bright rays; and more love than words can say." We all know how the various features express, to those who can read them, the character of the person represented. In children, as in adults, the eyes reveal the soul, the nose will power, the mouth and chin stand for purpose and determination, and what we call expression, the combination of all, is the mirror through which the inmost character of each subject is reflected. And next to the human face in interest is its counterfeit presentment, the portrait.

Leonardo da Vinci Among the most famous portraits in existence is that of "Mona Lisa" (My Lady Lisa), which hangs in the Louvre Museum in Paris. The artist, Leonardo da Vinci, one of the group of Florentine painters who made the latter part of the fifteenth century famous in the history of art, spent four years in completing it. Even then he did not consider it finished, and the charm which one of the world's greatest painters instilled into this portrait, four hundred years ago, has endured even to our own day. The more one studies this picture the more he is impressed with its ideal beauty. And the photographer who can bring the capacity to appreciate it rightly will find in it a comprehensive education in the art of portraiture.

The World's Fair The article by Harold Hutchinson, published elsewhere in this issue, on "Photo-Secession and the World's Fair," merits the attention of every reader interested in the progress of American Photographic Art. His logical analysis of the situation is very fair and searching. He puts the whole question syllogistically when he says the claims of the Photo-Secession amount to this: "Our photographs are the Only artistic. Now, we alone can judge our photographs. Therefore, we alone should exhibit at St. Louis." Mr. Hutchinson rightly concludes that since they have "cornered the market" on artistic photographs, the Photo-Secession is now a Photographic Trust, with methods.

"Good as we all believe some of their work to be, much as we owe to them, both for what they have done and what they have stimulated others to do, the friendly feeling which photographers at large should have towards the Photo-Secession is tempered when they play the Pharisee. It is only the truly great," he concludes, "who are not afraid to consort with publicans and sinners, to lead them up and on.

"It seems to me that he who has his work at heart cares more to do it well, in the prayerful hope that it will carry its truth and beauty irresistibly home to the soul of the observer, than he does whether some one else also has a chance or not to preach a little sermon of beauty and of truth."

His conclusion, that the whole aim of the Photo-Secession is the glorification not of art but of the individual, will meet the hearty approval of all fair-minded photographers. It puts in a nutshell the whole question of the attitude of the Photo-Secession towards the World's Fair at St. Louis.

Emerson President Eliot, in his recent address on Emerson, tells of how education used to be given almost exclusively through books. But in recent years, there has come in another sort of education through tools, machines, gardens, drawings, casts, and pictures.

"We have introduced into our schools," he says, "of late years, lessons in drawing, modeling, and designing — not sufficiently, but in a promising and hopeful way. Emerson taught that it is the office of art to educate the perception of beauty; and he precisely describes one of the most recent of the new tendencies in American education and social life when he says: 'Beauty must come back to the useful arts, and the distinction between the fine and useful arts be forgotten.'

"That sentence is the inspiration of one of the most recent of the efforts to improve the arts and crafts, and to restore to society the artistic craftsman."

The adoption of photography as an educational appliance in the schools is precisely along the same lines. It appeals to the sense of the beautiful and it cultivates the power of observation in children as no other study or appliance can possibly do. It is to be regretted that the distinguished President of Harvard University did not improve this valuable opportunity to bring to the attention of the world the great value of photography as an educational appliance, not only for lightening the burden of the teacher but also for helping along the mental development of the child along rational and easy lines.

Our Reproductions of Child-Life Pictorial photography has long been one of the leading features of the PHOTO ERA; but it has also been our purpose to so select our subjects for illustration that we may entertain and at the same time instruct all classes of students in the art. We feel certain that child-life, as seen by the camera, cannot but interest and appeal to all. We believe that the variety of subjects presented, and the methods employed in handling the tiny sitters will be of great value, not only to the amateur but to the expert and professional worker.

The June PHOTO ERA contains subjects from a greater circle of contributors than we have been able to present for many months, as evidenced by the following list:

"Child and Doll,"— by Mathilde Weil, of Philadelphia. Made from a 6½ x 8½ sepia platinum print. This photograph shows one of Philadelphia's aristocratic babies seated in the center of her kingdom, the nursery, fondly embracing her pet doll. The double lighting, the artistic values, and the chemical execution, make this picture, as a whole, worthy of the first position in the magazine,— the frontispiece.

"Cat's Cradle,"— by E. G. Merrill. Reproduced from a 5 x 7 sepia platinum print. A very pretty picture of child-life, well posed and of excellent chemical value.

"Durham,"— by Bertha Howell. Reproduced from a 5 x 7 sepia platinum print. A beautifully soft photograph, showing one of Boston's bright little men in a characteristic pose.

"Miss Bright-Eyes,"— by Miss Mary Carnell. This charming little nude-child study was made from a soft silver print, 5 x 7. The finished picture was in a grey platinum.

"Idling,"— by Henry Hall. An interesting picture of child and cat playing with a spool on string. Made from a 5 x 7 negative, taken with Voigtlander Euryscope, F. 6 : 3 ; ½ second, 5.30 P. M., July.

"The Nursery Choo-Choo,"— by W. A. Gurlick of the Notman Studio, Cambridge, Mass. Made from a 5 x 7 platinum print, beautifully lighted and chemically well handled. This photograph shows an excellent studio picture of child-life. What child could not be happy and interested with such a train of cars?

"Child-Life in Mexico,"— by Maurice Fleisher. A clever 4 x 5 "snap-shot" by a youthful worker in the art. This photograph was one of the prize winners in the Penn Charter School, March contest, Philadelphia.

"Bubbles,"— by E. H. Washburn. From a 5 x 7 silver print. This picture tells its own story. We would all like to turn back a few years in our lives and join this happy pair.

Portrait of Howard Day Aiken, who died during the past month. An excellent likeness of the child-portrayer, from a 8 x 10 sepia platinum print. Negative by Day-Baker.

"Portrait of Baby Boy,"— by Anne Pilsbury. A most interesting baby picture, in grey platinum, by one of Boston's child photographers.

"A Daughter of Dreamwold,"— by Litchfield Studio, Arlington, Mass. Made from a 5 x 7 silver print. We consider this one of the finest studio portraits contributed for our June issue; a remarkably soft, pleasing picture of one of Boston's future social queens.

"Boy and Violin,"—by Miss Alice Austin. Reproduced from a soft brown platinum print in 5 x 7 size. One of the most artistic and best all-round photographs offered for our Child-Life number.

"Portrait,"— by the Misses Selby. Made from a soft brown sepia print of the same size as our reproduction. Artistically posed and chemically well handled. The simplicity of this portrait is one of its greatest charms.

"Spring,"— by Mathilde Weil. Reproduced from an eight-inch panel in soft grey platinum. This is one of the most decorative pieces of work submitted for our June number. The lighting and chemical handling cannot be but favorably criticized.

"Typical American Boy," —by Frederic E. von Rapp. A well-handled, cabinet-size platinum portrait. The simplicity of this portrait and the strength of the boyish face brought out by the lighting make this picture peculiarly attractive.

"Playmates,"— by Gertrude Kasebier. The picture tells its own story. Made from a 6½ x 8½ negative. The print cut to panel shape was a platinum, black in color, but with a very warm feeling. Chemically and artistically this picture deserves the highest commendation.

"Portrait,"— by J. C. Strauss. From a 10 x 12 platinum print. A most cleverly handled specimen of the Lytrit Process, for which this worker is famous. The chemical handling and finish of this picture place it in high rank for photographic portraiture.

"Matter-of-fact Boy,"— by Frederick J. von Rapp. Made from a silver print of cabinet size. The original was finished in sepia platinum. The bold handling of this photograph gives it many qualities of a painting.

"Suprise," — by Osborn I. Yellott. A charming little picture of child-life, showing two children suprised at their toys. Reproduced from a delicate silver print, same size. Exposure ⅕ second; stop F. 7; Seed 26 plate; taken indoors, April, 3 P. M.

"Baby at Play,"— by Olive M. Potts. Made from a delicate, light-brown platinum 5 x 7 print. A charmingly posed nursery portrait, chemically, artistically, and mechanically well handled.

"An Interesting Story," — by Dr. C. H. Gardner. Made from a 5 x 7 warm black, platinum print. This picture tells its own story. Exposure ⅙ second; stop F. 8; Cramer Crown plate; interior, 2 P. M.

"A Boston Boy,"— by Maurice Burke Parkinson. Reproduced from an excellent warm brown, carbon enlargement, 20 x 24. The chemical qualities of this picture are the best, the pose natural, and the subject very interesting. The original is a fine example of professional work.

"Runaway Baby,"— by Cora Stanwood Cobb. From a 4 x 5 silver print. The little one, with hands wet from the water in the pail, is shaking the moisture at the turtle on top of the pump. Taken on Seed's 26 X plates; F. 8; ⅕ second, 10 A. M., June; dull light.

"A Future Queen,"—by C. M. Gilbert, Philadelphia. Made from a 5 x 7 sepia platinum print. An excellent portrait study of one of Philadelphia's young "400."

"Good Morning, Papa,"—by William S. Ritch. Peproduced from a 4 x 5 print. An interesting nursery picture. Taken on Eastman Film; B. & L. R. R. lens; F. 8; flash-light exposure.

"Children of Other Lands,"— by Wendell G. Corthell. Three little pictures, "Bashful Swiss," "A Member of the Swiss Republic," and "Street Lace-Workers at Interlaken." Fine specimens of hand-camera work.

"The Dancing-Lesson," — by Overton and Young. A clever little sketch of child-life. From a 6½ x 8½ silver print.

"Portrait of Edwina Hutton Woods,"— by the Brookline Art Union.

"Twentieth Century Cherubs,"— by D. T. Burrill. Reproduced from a 5 x 7 print.

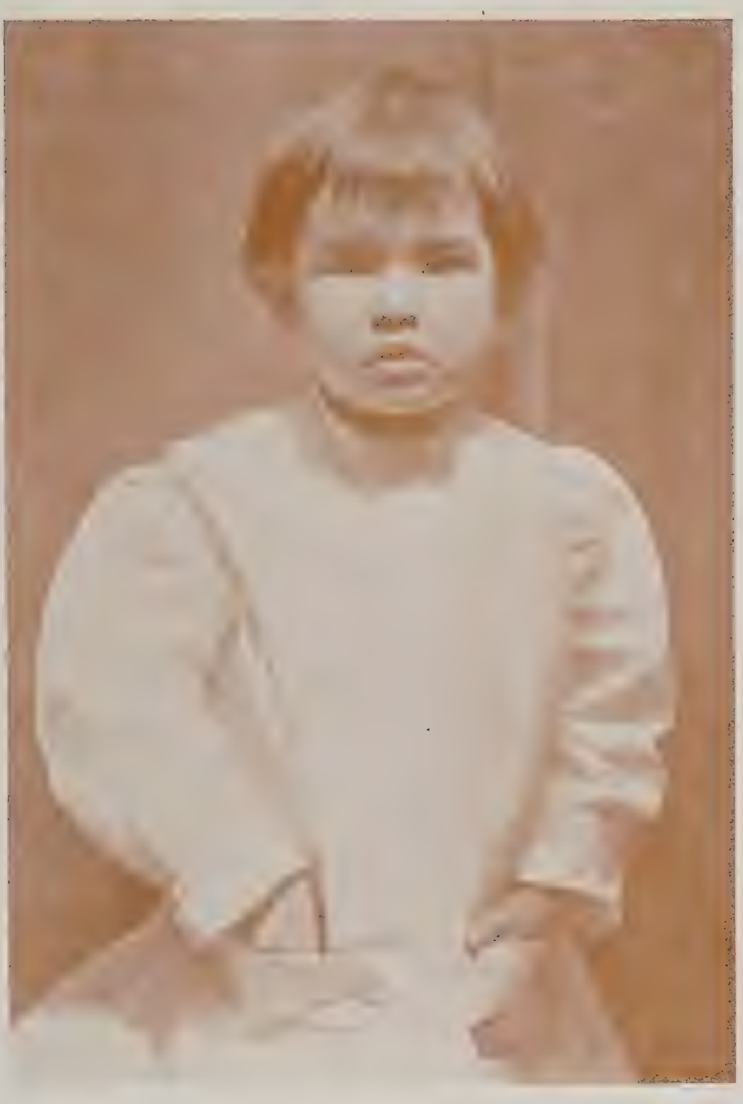
To Our Contributors We are publishing, this month, some thirty-three pictures of children. When we asked our friends for photographs of child-life we had no reason to believe that our request would receive such liberal response, in fact we did not know there were so many sweet children. As a result, we are able to publish only a small percentage of the pictures received. This will explain to many why the photographs which they so kindly sent do not appear in this issue.

Our Historical Number The illustrations in the July issue of the PHOTO ERA will be devoted to subjects of Historic Interest. We have had a very large number of interesting photographs sent us for consideration, from which we have selected the most representative for the delight and instruction of our readers.

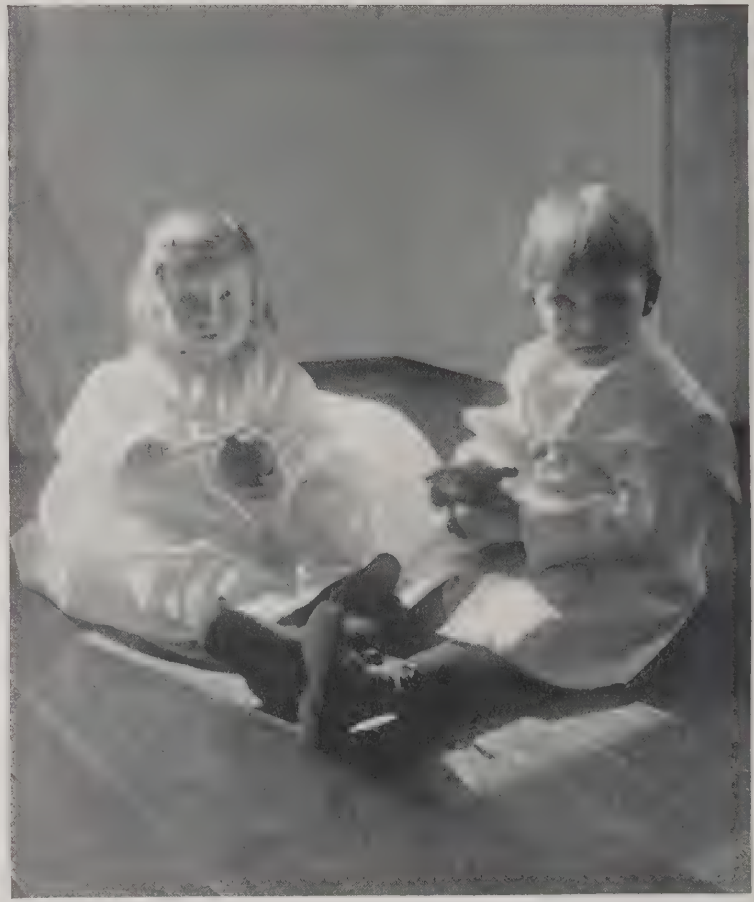
Our Marine and Seashore Number Our August issue will be illustrated with views taken on the ocean or at the seashore. It will be distinctively a Marine Number. All photographs sent in for consideration must be unique, artistic, or interesting views of the ocean or Great Lakes in some form.

We invite all readers of the PHOTO ERA to compete for one of the pages of our August issue. The picture of highest value in all respects will be selected for the frontispiece, while all photographs submitted will receive our careful consideration.

By referring to our list of subjects printed elsewhere you may find that you possess a picture that would come under some of the captions. If so, send it to us, and if practicable we will, at the proper time, give it a place in the PHOTO ERA.

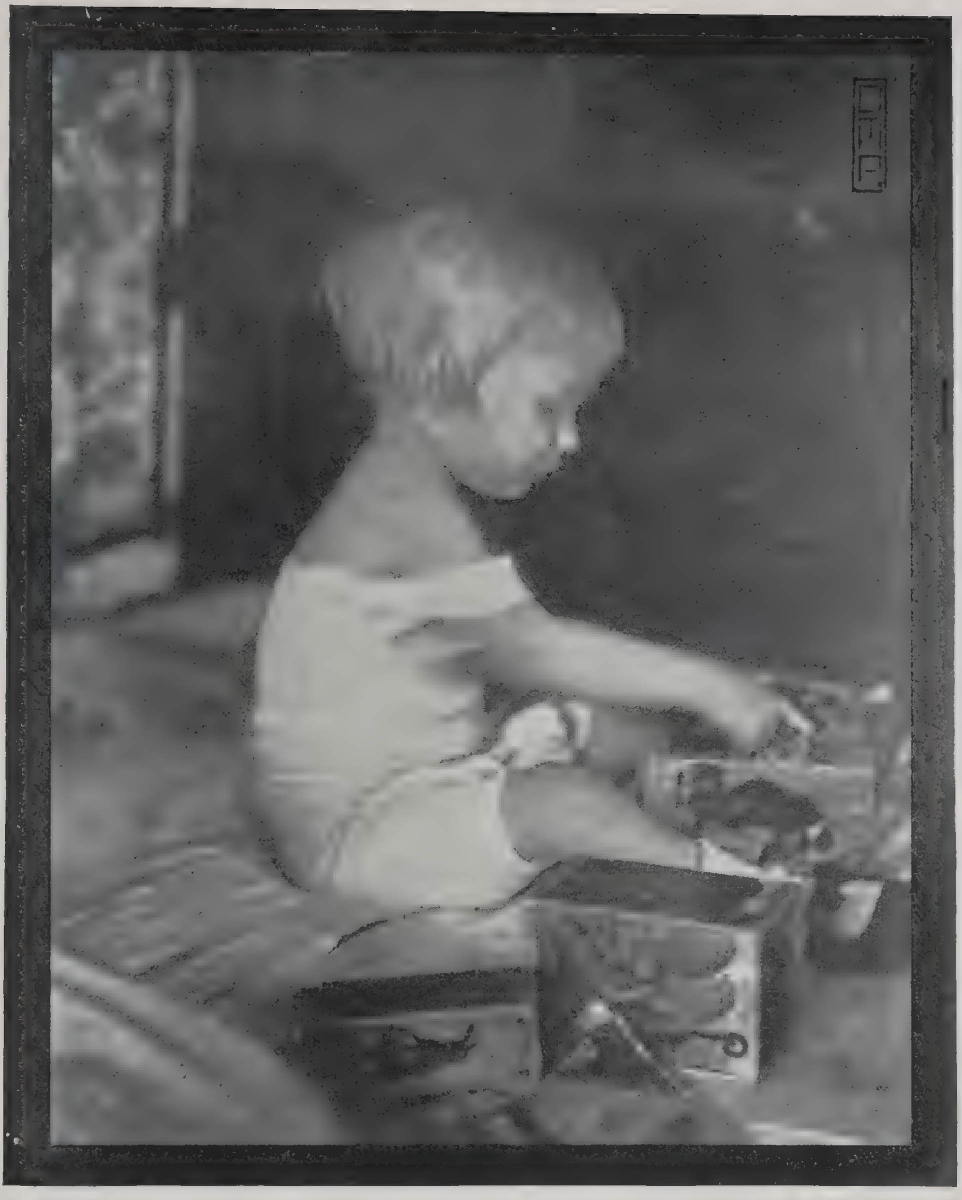


MATTER-OF-FACT BOY
By FREDERIC E von RAPP

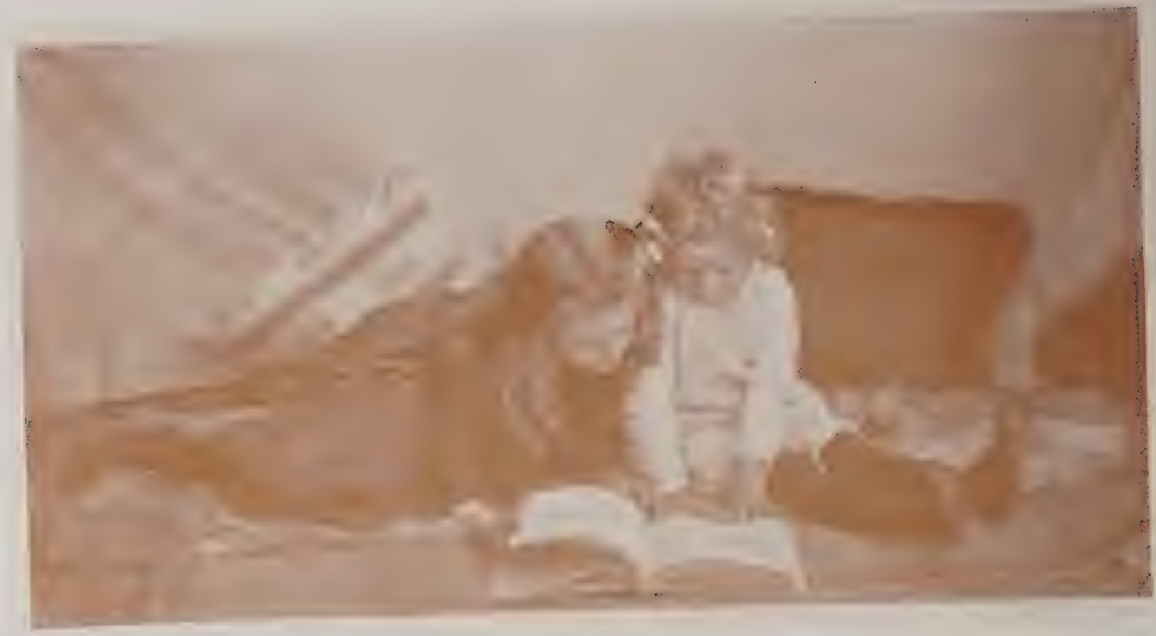


SURPRISE
By OSBORNE I YELLOTT

PHOTO ERA



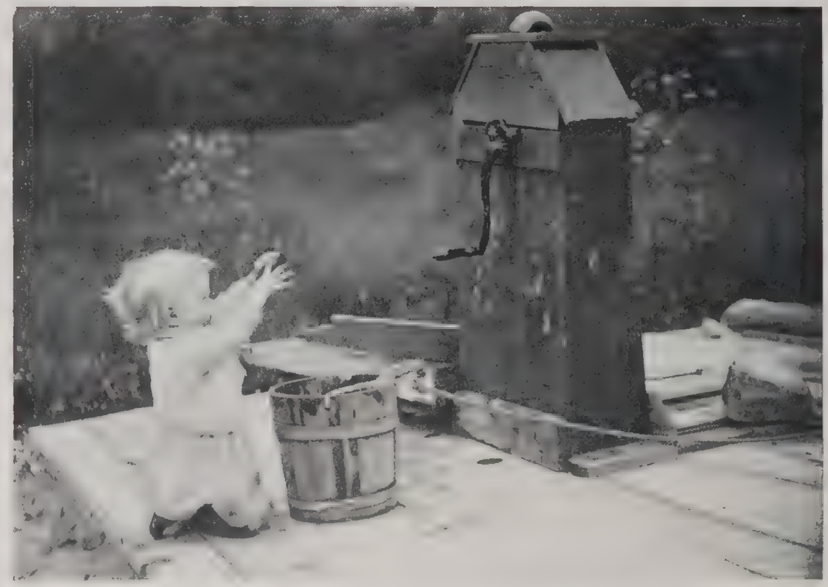
BABY AT PLAY
By OLIVE M POTTS



AN INTERESTING STORY
By Dr C H GARDNER

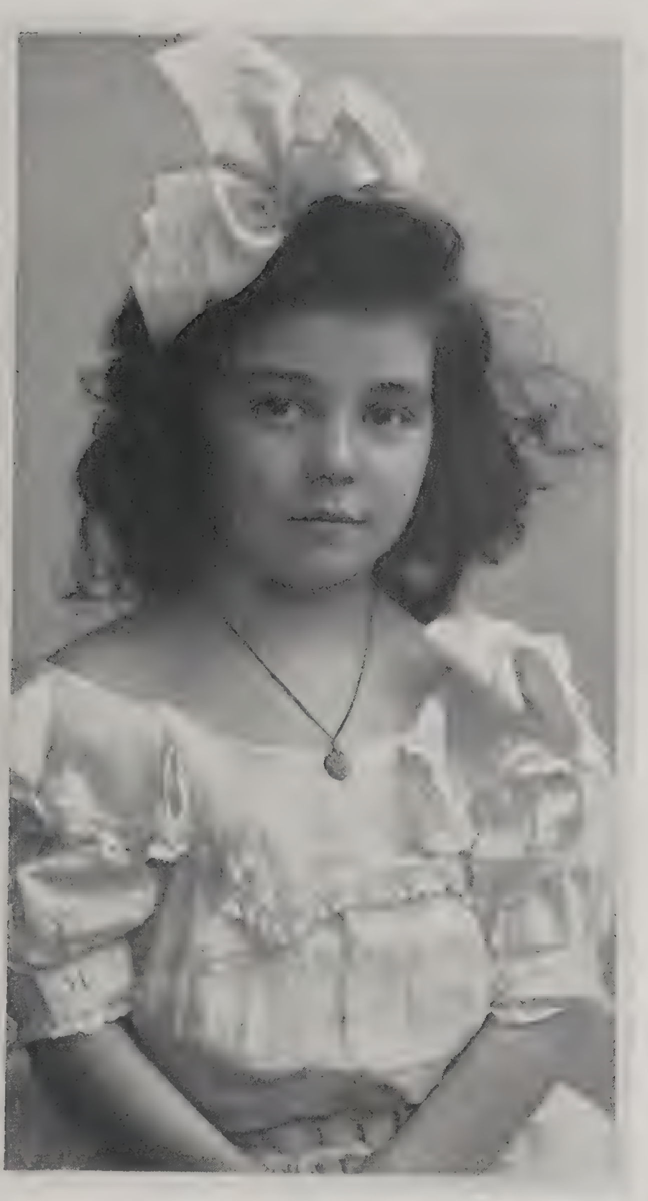
PHOTO
ERA

A BOSTON BOY
By MORRIS BURKE PARKINSON

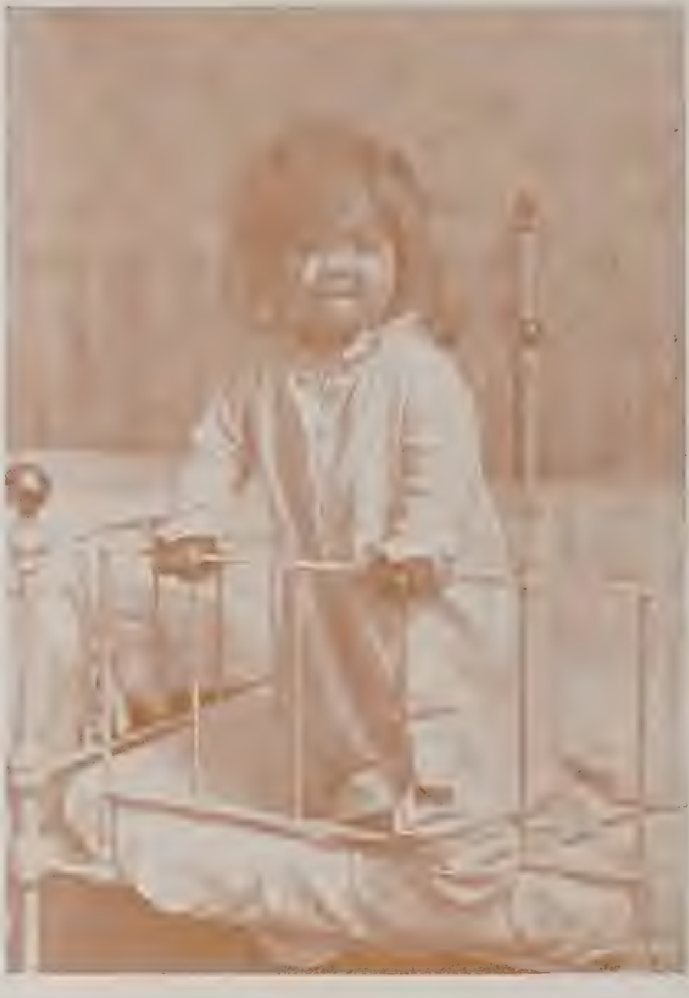


RUNAWAY BABY
By CORA STANWOOD COBB

PHOTO
ERA



A FUTURE QUEEN
By C M GILBERT



"GOOD MORNING PAPA"
By WILLIAM S RITCH

Foreign Abstracts

Non-halation Plates A new process patented in France for the production of non-halation plates is thus described. A glass plate is coated with a layer of plain gelatin, and after drying is dipped in a 7 : 1,000 solution of potassium permanganate. An insoluble compound of gelatin and manganese is thus formed, which is orange-brown in color, and cannot be removed even by hot water. After drying, the emulsion is applied to this base. The brown coloring matter is soluble in sulphuric acid or solutions of sulphites, forming soluble and nearly colorless manganese salts. Therefore, on development with a developer containing sulphite the color disappears. A sulphite fixing bath is also recommended, and if the coloration is still not entirely removed the last traces go, on laying in the following bath:

Water	1,000 cc
Sodium sulphite	100 g
Nitric acid	30 cc

(Phot. Chronik, 1903 : 223).

Permanent Uranium Prints Uranium-toned, bromide prints, which ordinarily deteriorate after exposure to light and air, become completely permanent when they are varnished with a five per cent solution of white dextrine to which a trace of glycerine is added. After washing, the prints are to be laid in the solution for five minutes, drained, and hung up to dry. (Phot. Chronik, 1903 : 223).

Intensification and Restoration of Negatives Chapman advises that negatives be not intensified when the preservation of the original negative is important, but that a positive and fresh negative be made, the exposure being suitable to gain the desired extra contrast. The principal reason for this recommendation is the fact that all the author's intensified negatives have become useless in three or four years. Having found no remedy for this from experienced chemists, the author himself experimented with potassium cyanide in weak solution, and found that it removed stains due to intensification with mercury and cyanide of silver without any apparent effect on the negative itself. On further experiment it was found that the deepest red or yellow stains caused by developers, and also iridescent surface stains, were completely and harmlessly removed. The potassium cyanide solution should be 10 grains to the ounce and *must* be made with absolutely pure water, distilled water being best. (J. Phot. Soc. Phila.)

Catatype Dr. Hanneke gives definite instructions for using an ordinary negative but appears to have considerable doubt as to the practical value of the process. Fifteen cubic centimeters of chemically pure 30 per cent hydrogen dioxide is throughly shaken with 200 cc of absolute ether. The upper layer of hydrogen dioxide dissolved in ether is decanted after settling, and the negative is flooded with it. The ether quickly evaporates, and a piece of single transfer carbon tissue is pressed into contact with the negative for a minute or so. The tissue is then immersed for a few seconds in a solution of sulphate of iron 10 g, sulphuric acid 2 drops, water 200 cc. The sheet is quickly rinsed, and immediately immersed in a one per cent gallic acid solution, or a two per cent solution of potassium ferrocyanide, and finally thoroughly washed. (Phot. Mitt., 1903 : 99).

Timing Development Bennett's paper on development, abstracted in our last number, has aroused lively opposition from the advocates of the time method of development. The principal point brought out by the replies is that the developer used by Mr. Bennett, pyro-ammonia, is the one developer known to be unsuitable for time development, owing to the continually varying amount of the ammonia. Consequently, criticisms of time development based on the employment of this developer are unfair. They also point out that Mr. Bennett himself admits that any change in the developer, after development has begun, is useless, and that the composition of the developer must be fixed before beginning. This being the case, Watkins says that it is better to go a step farther back, and make the exposure right, rather than the developer. (Amateur Phot., 1903 : 336 ; 369 : 379).

Notes and News

INTERCOLLEGIATE PHOTOGRAPHIC EXHIBITION

During the past two months the Harvard Camera Club and the Camera Club of the University of Pennsylvania held their second photographic contest, the pictures being exhibited first in Philadelphia and later at Cambridge.

The first prize was won by C. Leonard E. Newland, of Philadelphia. The title of his photograph was "Evening." This same picture took first prize in the PHOTO ERA contest of last winter.

The second prize was awarded F. L. Shuster, Jr., of Harvard, for a picture of an old marble mausoleum. The title was "Where the Dead of the Dead Past Lie."

Honorable mention was awarded to "The Landing," by Ernest L. Carr; "December," by William G. Housekeeper; and "A Dutch Courtship," by Herbert S. Welsh. We publish the latter among our pictures of Child-Life.

The competition as a whole was very interesting and instructive; in fact so much interest in photography has been aroused that it is now proposed that Columbia, Yale, and Princeton be asked to compete next year.

JAPAN PAPER FOR MOUNTS Elsewhere in this issue we publish an illustration of a Japanese paper mill by courtesy of the Japan Paper Company, of New York. This particular mill produces fine tissues, generally used for proving wood cuts and for letter copying books. Although the methods are somewhat primitive the output of this mill is of a high order of excellence.

The raw material used is the inner bark of certain shrubs, which after being stripped, washed, and bleached, is picked over by Japanese women and girls and then pounded into pulp by the men. This pulp is soaked in small streams and running water and is then mixed in various ways for the different kinds of paper and later on is made into sheets, on frames of split bamboo. As the picture shows, these sheets of paper are dried on long boards, out of doors.

Owing to the great demand for Japanese vellum and copy paper for export, several mills have recently been constructed.

This paper can be sensitized so that it can be used with negatives for printing purposes, as a photographic paper, and it can also be used for mounting prints; its rich color and toughness lending itself specially to this purpose.

BOOK REVIEW We have before us Vogel's Practical Pocket Book of Photography, by Dr. Ernest Vogel, the celebrated German photographer.

This book presents all the elements of photography, from the choosing of lenses and appparatus to the making and printing of platinum paper, in a most concise manner. All this information is given in clear, every-day language, easily understood by the amateur of limited experience. The tables and information make it of great value to the professional, as well as to the amateur worker. Vogel's Practical Pocket Book of Photography. London: Swan, Sonnenschein & Co., Limited. New York: The MacMillan Co.

In the May issue of the PHOTO ERA, the portrait of a lady, by Garo, entitled "Mrs. S. J. Kitson," should read Theo Alice Ruggles Kitson. Mrs. Kitson and her husband, Henry Hudson Kitson, are both well known in the world of art.

FUTURE ISSUES The subjects of the future issues of the PHOTO ERA will be as follows:—

July — Portraits and Historical Views; especially those relating to the Revolutionary War.

August — Seashore and Marine Views.

September — Portraits and Mountain Views.

October — The Photographic Art in Philadelphia.

November — Portraits, and Harvest and Hunting Views.

December — The Photographic Art in New York.

1904.

January — Prize Winners in PHOTO ERA Competition.

February — Portraits and Winter Life.

March — The Photographic Art in St. Louis.

April — Portraits — Rainy Day and Night Views.

NIAGARA PAPER MILLS We have recently received a number of enquiries from readers in various parts of the country, asking to be advised regarding the beautiful cover stock used by the PHOTO ERA. This stock is manufactured and sold by the Niagara Paper Mills, of Lockport, N. Y. It is part of the famous line of Sultan covers, used by the most exclusive publishing houses of the country. The colors and texture of these papers lend themselves very readily to photographic purposes as well. The oriental effects are the result of considerable experimenting and study on the part of expert colorists at the mill, and we believe that when photographers understand the artistic possibilities of these papers there will be an unprecedented demand for them from all over the country. Samples will be cheerfully furnished on request, by the Niagara Paper Mills, Lockport, N. Y., or the PHOTO ERA office

Correspondence

On Friday, May 15, before the American Philosophical Society, Prof. Arthur W. Goodspeed, of the Randal Morgan Laboratory of Physics, of the University of Pennsylvania, announced that photographs could be made by light, hitherto unknown, emanating from the human body.

There is nothing specially new or startling in this alleged discovery, since as long ago as September, 1897, the attention of the Photo Era was directed to the following short article which appeared in "Modern Astrology," published at West Hamstead, London, N. W., England:

"Dr. Luys has described some experiments made by him, showing the presence of luminous emanations which surround the human body, and he has demonstrated it, according to the "Electrical Review," in the following extraordinary manner by means of photography. In the dark room, place your fingers for about twenty minutes on an ordinary photographic plate which is itself in a bath containing the usual solution of hydroquinone, and after this exposure fix the negative in the usual way. You will see not only your fingers and the lines on the skin reproduced, but also their pores, and, what is still more interesting, around the fingers a sort of zone or halo a third of an inch wide, which would lead one to believe that we live in a luminous fluid, which has enabled us to obtain a photographic print of itself and of the fingers, as if under the influence of light. Dr. Luys has tried the experiment, but without results, on patients whose hands were paralysed, benumbed, or insensible to touch. No image appeared on the plate."

Our correspondent writes as follows:

Dear Mr. Cummings,— I have not made the experiment as yet, but thought it might interest some of your readers, and I should like to have some one give a logical explanation if they can. It seems to me that if the experiment were made in an absolutely dark room, or if the plate were well protected from the red light, that no image of any kind would be obtained. I think that the zone or halo is produced by the light from the lamp being reflected from the fingers to the plate, causing fog, or the so-called halo; and the developer being warmed by the fingers, would act upon the plate with more vigor around the fingers. A person paralyzed, I believe, has not the warmth in the affected parts that a well person has, and if such is the case, the developer would act with less vigor, and the halo would not be found.

Possibly my idea is entirely wrong, and for that reason I should like some one with more experience in photography to give his ideas upon this subject.

Yours very truly,

Charles Bruce Shannon.

Editor Photo Era:

Dr. H. D'Arcy Powers, in "Camera Craft," takes exceptions to some of my statements in a recent article in Photo Era. Yet, as some of Dr. Powers' recent statements require elucidation, it is only just to look to Dr. Powers for such explanation.

I think my reasons, as given in Photo Era, for preferring a No. 10 rather than No. 11 needlehole for general use, evidently overlooked by Dr. Powers, are sufficient, namely, less liability to vibration owing to shorter exposure.

While, as Dr. Powers says, a smaller aperture does give a sharper image, yet the difference between No. 10 and No. 11 would be almost imperceptible and a slight gust of wind might even then give the No. 10 decidedly the sharper image.

As needlehole photography is becoming more popular as it is better understood, and as we are all looking for reliable data, Dr. Powers' assertion that he made an 11 x 14 negative at three-inch focal length sets at naught all accepted rules of exposure and focal length. It can be readily seen that while the center of a 11 x 14 plate is three inches from the needlehole the four corners are each nine and three eighths inches from it, and therefore require something over twelve times the exposure of the center of the plate. Also the two ends of his building would be greatly magnified in proportion to the center, or portion exposed at three-inch to four-inch focal length.

As to Dr. Powers having an overexposed cloud negative in one-eleventh second, on Cramer Crown plates, No. 10 needlehole, four-inch focal length, it seems incredible, and I can only state that up to the present time I can not approach such speed.

My remarks about making a 6_2 x 8_2 negative at three inch "being possible but not advisable," will, I believe, be found correct in general practice.

Children of Other Lands

WENDELL G. CORTHELL

OUR illustrations give glimpses of some of the children the photographer meets in his rambles among the peoples of other lands.

The greatest variety in all the works of the Creator is found among his children, old and young. In a hundred ways the variations are shown. Language, habits, customs, dress, food, occupations, plays — in all these and in many other lines are the characteristics of children made manifest to us. European children all cry and laugh, but even in that they show a foreign air. The writer is sorry to record that among no people he has seen is there so much crying among children as here at home. The English are proverbially plucky, and shed few tears. They scorn to show feeling, especially when hurt, and pride themselves on their backbone.

Nowhere is this more so, however, than in Germany. There, even in the little children, the soldierly quality of grit shows itself. A German child shuts his teeth and lets the pain rage. As an illustration: one of the boys shown in the German group fell from his bicycle this last summer and injured his face so badly that one eye was swollen and closed, and half the face blue and bruised. It was a hard looking face. The writer was visiting in the family and saw the boy in his sorry plight. He would not cry. He had been taught it was a disgrace. Not a whimper escaped him. Like the Emperor, he stood up straight and smiled. German soldiers are made of such stuff. No wonder they swept over France and held Paris in their grasp. May we never be called upon to face upon the plains of war such a nation!

The Swiss children, of which we give three illustrations, are entirely different in their appearance from the English or German. They are natural plodders, and show it even as children. Though not as sparkling as the French, or gritty as the German, yet they possess a natural and cultivated courtesy that fully compensates. They can give the American child lessons in courtesy, respect for property, and absence of license. They do not run the house and dominate their parents, as too many of our children do at the present day, but have from the first a dignity of demeanor that makes them very attractive.

If an American child, who is observing, spends a year in Europe among the children of other tongues, he returns with his conceit eliminated. He will learn how to improve in every land he visits. In England he is surprised at the lack of slang, and chagrined at the slips of his own tongue. The language of the average English child is pure and grammatical, and, as a rule, good enough to print. The dictionary of American slang is a big book. Not so in England. Children are not allowed to take on habits of language that will prove a handicap to them through life. They must cultivate pure English, and nowhere is better language used than in that country. Our child traveler notices also that there is a ruddiness of cheek in the English children that is unknown in America. It may partly be the result of the climate, but more than all to their correct habits of life. Candy is the bane of our children. There, little or none is used. The diet of the children there is far more healthful than here. The writer has frequently been entertained in English homes, and has found the children very attractive, and often thinks he would like them as models to put before some of our lawless specimens of childhood. The American children are bright, but brightness is not all. Perhaps we are more superficial. Better have a little of the thoroughness of the German children, a little of the courtesy and respect of the Swiss, some of the grace of manner of the French, and a touch of the charm of gesture and conversation of the Italian.

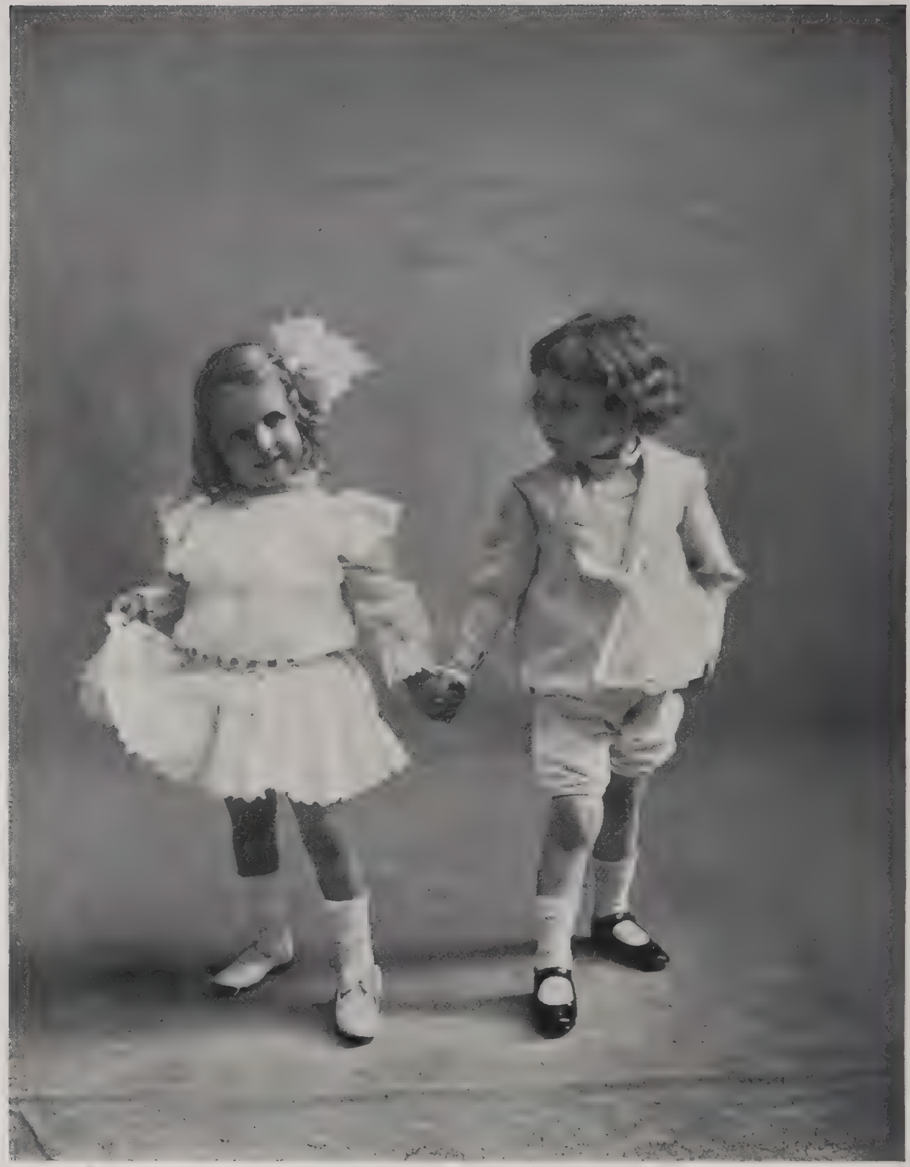
The New American is a conglomerate of all, and hence may yet take the prize.

Bashful Swiss. An Early Worker.

A Member of the Swiss Republic.
Will he ever be President?

Street Lace-Workers at Interlaken.

CHILDREN OF OTHER LANDS
By WENDELL G CORTHELL



THE DANCING-LESSON
By OVERTON & YOUNG

PORTRAIT EDWINA HUTTON WOODS
By BROOKLINE ART UNION

The Point of View

As I write this I can almost hear the dolorous sigh with which some disgusted reader exclaims: "Here is *another* man going to tell me not to put my sky-line in the middle of my picture, or stand in the middle of a road when I want to photograph it, or to point my camera at the sun, and to try always to take a business building from a window across the way!" But even at the risk of standing self-convicted of applying to this paper a title which is a misnomer, I must disclaim any such intention. It seems to me that after the amateur photographer has his outfit and has learned how to use it,—is, in other words, sufficiently well acquainted with the technique of photography not to trouble himself about his manipulations, — the first thing he needs when attempting to make a picture is not, as has been said, a suitable subject, but a definite way of looking at his undertaking; in other words, a point of view. It is of this point of view that I write.

Some one with considerable ability as a maker of epigrams has stated that "Art is an idea seen through a temperament." Adding on the word "photographic," and substituting "subject" for idea," we have a premise which would indicate that mental points of view were as numerous and unending as photographers. But while few will dispute that "Photographic art is a subject seen through a temperament," it is obvious, though perhaps not logically so, that the mental points of view from which photographs are taken are not many, and that, still more strangely, few as there are, there are more than enough to cause confusion.

First, of course, there is the point of view of the press-the-button-let-others-do-the-rest man, which can be dismissed from further consideration in this article with no further discussion.

Then there is the careful photographer, whose only aim is to make a photographic record of those things which his eyes see and which, for reasons sentimental or practical, he may desire to reproduce.

Still other photographers have a little god of approval, which turns away its face until the photographic record has been made with proper attention to the best standpoint, the amount of light and shade, the time of day, the composition of line, etc. This little god is most particular about the point of view (the phrase is used literally this time), and wants the most perfect photograph which a rigid adherence to a set of rules for drawing and painting will allow.

Then there are those who make pictures.

When a photographic artist wants to make a picture which is not to be a photographic record, he puts all questions of light and shade, of the time of day, of the proper lens, stop, time of exposure, height of tripod, etc., out of the way until he has fully decided what he wishes to represent. If he has an idea of some story, some mood, some phase of nature which he wishes to preserve, he composes the picture as much as possible in his mind, and then attempts to find a situation in nature which, manipulated with all the technique of photographic art, will result in what may truly be termed a "picture," and which, excepting only the most literal definition of the word, is in no sense a "photograph."

To make plain what I mean in regard to this last "point of view," and which is *the* point of view meant in the title of this article, I would call attention to the two accompanying plates. As nearly as possible these were taken from the same spot, — a spot selected after over an hour's work of setting up and taking down of tripod and camera. The idea in taking these pictures was not to make a photographic representation of a ford in the Zoo Park at Washington, but to produce two pictures which would give to the observer an idea of summer and of winter. When an employee of the Zoo failed to recognize the spot until the locality was mentioned, I considered that the picture had received a high compliment. I do not wish to be understood as saying that the true picture is never a photographic record, or that it is necessary to so far obscure the natural features of a landscape as to make it unrecognizable in order to produce a picture. But I do contend that when a photograph of a spot familiar to the observer calls up an idea or a mood rather than the locality, the maker of the picture can rest satisfied that he has attained something more than mere photographic excellence.

I have taken a number of photographs of this spot from many different standpoints, never getting anything particularly pleasing until I looked at the matter from the point of view outlined above. I tried to forget that I was photographing some particular trees, some special body of water in the concrete, and pictured to myself only the foliage, the lights and the shadows, the deserted, winding road, and the softly running stream which are associated in many minds with summer.

The picture of "Winter" is, perhaps, not so successful an expression of the idea as might be desired, but the two varying moods of the same spot, taken together, are perhaps a better suggestion of the changing seasons than they would be with a winter picture of some other view.

To some few favored mortals the taking of a photograph is always the making of a picture. To most of us, however, the real picture, the complete expression of our artistic sense, is a constant ambition, never entirely realized. We have a few, — perhaps only one or two, — cherished negatives, which, when properly manipulated, seem to us to express through our temperament an idea better than any of our other photographs. These are the pictures which we have studied over, labored over, sometimes cursed over, and which, are they not entirely accidental, are taken from "*the* point of view."

C. H. Claudy.

The Round Robin Guild

Specially designed for the Amateur Photographer and the Beginner.
Conducted by Elizabeth Flint Wade

(Any amateur photographer may belong by sending in his name and address)

Boston will be the headquarters of the National Historic Picture Guild. Boston is the center of a locality so closely associated with the early history of our country that nearly every foot of ground has its legend or its historical incident. Boston, therefore, is the fitting place where the business direction of this great movement should be established.

Its historic localities are likewise picturesque localities. Along the "North Shore," the place known geographically as Cape Ann, the amateur photographer may pursue with his camera much the same course as the litterateur, with his pencil, who wanders from place to place along

"This shore with fowler's tact,
Coolly bagging fact on fact.
Naught amiss to him can float,
Tale, or song, or anecdote.
Village gossip centuries old,
Scandals by the grandames told,
What the pilgrim's table spread,
Where he lived, and where he wed."

The amateur photographer has this advantage over his literary brother for he cannot only "bag the facts," but make pictures of the places with which they are connected. as well.

This strip of Atlantic coast begins at Beverly and extends to Essex river, and includes some of the most delightful resorts on the seashore. Whether wandering through the streets of old Beverly which marks the beginning, or standing at the extreme point of the Cape where a heap of bare and splintered rock reaches far out into the sea, the amateur will find something to entrance the senses, something to embalm in his gelatin films and preserve as mementos of its beauty and diversity.

Salem, whose very name recalls remarkable epochs in the country's history, is the gateway to this enchanted land.

The ancient town of Beverly is directly across the river from Salem, and its beautiful homes, set in the midst of forests and surrounded by acres of velvety lawns, resemble the landed estates of English noblemen. It is a state of cultivated wildness fair to see, and as unusual in this country as it is fair.

Beyond Beverly Farms is Manchester, and between, jutting out into the sea, is a slim strip of land called Tuck's Point, where, every year, is held the meeting of the "Elder Brethren," a society composed of men of Manchester who have passed the half century mark. On Thunderbolt Rock, near Manchester, stands the picturesque house built by James T. Field.

This "sightly site" for a house was looked upon with contempt by the villagers. One of them accosted Mr. Field shortly after the purchase, and, pointing to the rocky cliff, said, —

"I don't s'pose yeou'll b'lieve that some blamed fool's bought that 'ere rock an' is goin' to build a house on't?"

"Oh, yes," said Mr. Field, "I can readily believe that for I am the 'blamed fool' that has bought it!"

Magnolia, just beyond Manchester, was for over two centuries the home of fishermen. It is here that Cotton Mather, pursuing his ministerial journeys through the then wilderness, found the fragrant magnolia, and the name of the tree became the name of the place.

Gloucester, quaint old Gloucester! One must spend weeks in this ancient town to really visit all her historical houses and places. Though dignified, and commonized too, by the name of city, Gloucester is really a hereditary fishing-post, and the newcomer is inclined to believe that the odorous spirits of all the dead and gone codfish that have been brought to the port haunt the streets, lanes, and alleys.

The Thatcher Island Lights, those faithful sentinels of Cape Ann, mark the historical spot where "the soul of Parson Avery," that grand pioneer minister of the colonies, "went singing to its rest." In the little hamlet of Riverdale is the church where John Murray set up the standard of Universalism in America, and here is stored a curious, old hand-organ with a repertoire of thirty tunes. This instrument was one of the spoils of the Revolutionary war, and has been stored in the church all these long decades.

A beautiful lane of willows leads into the old settlement of Annisquam, and between Annisquam harbor and Essex river stretches in whitened glory the silver beach of Wingaersheek, once known as Coffin's Beach, but now bearing its original Indian name. The high knoll at the end of this beach is known all the country round as "The Loaf." It was once sold for a two-penny loaf, hence the name which will ever cling to it.

Ipswich is a town which delights the antiquarian of history, so much of historical happenings is found within its limits.

One will not overlook "Plum Island," guarding the coast, for

"Long and low, with dwarf trees crowned,
Plum Island lies, like a whale aground."

There still stand the old homesteads over whose thresholds "Life and Death have come and gone," and it is on its misty hillsides that Judge Sewall made his famous prophecy.

But we must call a halt in this recapitulation of the historical places in the midst of which is established the headquarters of the National Historic Picture Guild. This brief sketch is given in order that when our annual meeting occurs the amateur will remember the attractions in and around the city of Boston. While not strictly in the line of photographic work, it is a photographic suggestion.

The members of the Guild should make themselves familiar with the locality which they represent, and one way to enjoy the work is to look up all the poems and stories which have been written concerning the places. It is suggested, however, that this research of the literature of places should not include the historical novel of to-day.

Heredity is responsible for customs as well as habits. Our ancestors, when posing before a camera, or as they expressed it "being taken," invariably attired themselves in their best clothes. "Best clothes," therefore, became an hereditary adjunct to a picture.

Pictures of children taken in the early days of photography look as if the youngsters had been caught and caged and that the confinement had soured their dispositions. Frowns, scowls, and black looks are the predominating expressions found in the likenesses of these first youthful victims of Daguerre's discovery. One searches in vain among these early specimens of child-photography to find a really natural child. To trace the cause one has only to consider the fact that they were wearing their "best clothes" and even the child of to-day considers these garments as irritating and villainous as that garment of martyrdom, the shirt of Nessus.

It is due almost entirely to the amateur that the "best clothes" and the photographic likeness are becoming disassociated. Unlike the professional, the amateur had no reputation to sustain, so he could ignore all the old canons of portrait photography without subjecting himself to criticism. When the amateur photographer combines with his photographic skill the artistic knowledge essential to the true making of pictures, his camera serves as a medium whereby to express his artistic ideas, and we have the pictures of real child-life.

Posing is a fine art, and the posing of children a superfine art. Blessed is the photographer who has sense enough to know that as soon as he begins to pose a child the simplicity of his picture is gone.

To pose children in unnatural positions or to picture them doing things contrary to child nature is to destroy the child element and to produce a picture devoid of artistic composition.

There are so many phases of child-life to picture that one need not go out of the way to find variety in his photographic studies of children.

A city affords unusual opportunities of making pictures of children. Many interesting subjects are found among the precocious youngsters whose playground is the streets and whose amusements are not those set down in the manual of kindergarten plays.

To get characteristic pictures of this class of children, one must frequent the places where they most do congregate; watch them at their various sports; their mischievous pranks; and become familiar with their ways. With this preliminary knowledge, a quick eye, a trained hand, and a rapid plate, will enable the amateur to secure pictures which in pose, style, and expression, may rival some of the genre studies of the painters who delight in picturing "Ye Streete Boy, His Ways."

The amateur who essays photography of the child of the streets must be willing to spend more or less time "stalking" his game, and he must be prodigal not alone of time, but of patience and dry plates.

Very interesting pictures may be made of the real child, the every-day, out-of-door youngster, unaffected and unposed.

It requires skill and art to make successful pictures of children. Any one can make photographs, the few are capable of making pictures. Whoever possesses the gift—for it is a gift — of photographing children successfully, making pictures instead of photographs, has at command an assured income. The children we have always with us, and the parents are always anxious to possess their pictures.

The subject of the bimonthly contest for July will be genre studies of children. Genre is a French word meaning kind, or sort, and was formerly used to describe a kind of picture. Genre historique, meant a historic picture; genre paysage, a landscape picture, etc. The word is now used to denote pictures of scenes in common or every-day life. Stedman, in his "Poets of America," says: "We call those canvases 'genre' whereon are painted idyls of the fireside, the roadside, and the farm — pictures of real life."

The charm of a genre picture is the unconsciousness of the subject and his absorption in his vocation or avocation. With the adult the result is attained by impressing upon him that one wishes to photograph his "occupation" and not make a portrait, but with children one must watch one's opportunity. Even babies seem to know when a camera is pointed at them, and gaze at the operator as long as he busies himself with his instrument. It is here that the patience must be exercised, and the amateur must wait until the child has forgotten the camera and become absorbed in his play. Our present number is full of beautiful examples of child-photography, and we expect our prize contest will bring out many more equally as attractive.

SALTING PAPER

"Salting paper" is the process by which photographic or other paper free from impurities is coated with chloride of sodium, chloride of ammonium, or chloride of barium. This coating prevents the sinking of the sensitizing solution into the fiber or pores of the paper.

One can buy salted paper, or have it salted by the dealer in photographic supplies, but it is such a simple matter to salt the paper, that in order to insure freshly salted paper it is wiser to do it one's self.

Chloride of sodium (common salt) baths are prepared in the proportion of fifteen grains of salt to ten ounces of water. Fill a large porcelain tray two thirds full of the salt solution. The sheets of paper to be salted must be smaller than the dish holding the solution, an inch each way giving ample room for the handling of the paper. Take hold of the sheet by opposite corners and curve the paper backwards, lowering it into the bath gradually until it floats on the surface. Let it remain for a minute or two, then remove, drain, and pin up to dry.

To salt paper with chloride of ammonium make a solution of chloride of ammonium, 160 grains; water, 20 oz.; gelatin, 40 grains. Heat the water and dissolve in it the gelatin. When it is cold add the chloride of ammonium. Sensitize the paper according to the directions given above. Another formula which combines the ammonium and sodium in the solution is made as follows: Chloride of ammonium, 30 grains; chloride of sodium, 30 grains; water, 20 oz. This solution may be applied with a brush but the coating is more evenly distributed if the paper is floated on the solution.

Barium chloride is not often used except in commercial papers.

To sensitize salted papers one may use any sensitizing formula. The sensitizing solution is usually applied with a wide brush, the paper being first brushed evenly in one direction, then brushed again at right angles with the first strokes.

A sensitizing solution for the chloride of sodium salted paper is made of one half ounce of nitrate of silver and ten ounces of water. After the silver is dissolved take seven ounces of the solution and add to it, drop by drop, strong ammonia water. A brownish precipitate will form at first, but the ammonia is added until the solution is clear again. When it is clear add the three ounces of the silver solution, filter, and store in bottles covered with black paper. Keep tightly corked and the bottles stored in a dark cupboard.

A solution for the ammonium-coated paper is made of four ounces of water and 240 grains of nitrate of silver. Dissolve thoroughly and apply to the paper with a brush, brushing the solution both ways until the paper is entirely covered.

Another sensitizing solution is made of 60 grains of nitrate of silver to one ounce of filtered water. Ammonia water is added in the proportion of 25 drops to each ounce of the solution.

Salted papers sensitized with these solutions are easily prepared and make very delicate gray prints.

Do not print much deeper than is desired in the finished print. They may be toned in a separate bath or the combined bath may be used. The sensitized side of the paper is hard to distinguish from the plain and before sensitizing mark the plain side of the paper with a light pencil mark. Prints made on plain salted paper of thin texture are very fine for interleaving books with original illustrations.

SEPIA TONES ON VELOX PAPER

Warm browns and sepia tones may be obtained on Velox or other developed paper by toning them after washing and fixing in a hypo toning bath. The bath is compounded as follows:

Boiling water, 35 oz.; hyposulphite of soda, 5 oz.; powdered alum, 1 oz.; granulated sugar, 1 oz. Dissolve the hypo in the boiling water, then the alum, and last the sugar. Stir until all are thoroughly dissolved, then

TWENTIETH CENTURY CHERUBS
By D T BURRILL

PHOTO ERA

filter through blotting-paper. The solution will be of a milky color. The print is developed and fixed in the usual manner; then, without washing, place it in a tray containing enough of the toning solution to cover it well. Let it remain in this bath for five minutes; remove and place in a bath containing a quantity of the solution heated to about 130° F. It will tone in about twenty minutes. The print may be left in the bath longer if the desired tone has not been reached. The placing of the print in the cold solution hardens the film so that it may be toned in the hot bath without fear of blisters. If, however, blisters do occur, place the print in an alum bath composed of one half ounce of alum to fifteen ounces of water. After toning wash thoroughly and dry. All trays used in developing and fixing Velox prints should be perfectly clean and free from chemical deposits, otherwise the prints are liable to be spotted.

Negatives which have been intensified with bichlorid of mercury sometimes fade away owing to the action of the intensifier on the film, the washing not having been well done. They may be restored to their original printing qualities by first soaking them in water until the film is soft, then placing them in a solution of Schlippe's salts, using ten grains of the salts to one ounce of water. Let the plates remain in the solution until the density is restored, wash, and dry. Schlippe's salts are also used for strengthening weak negatives.

ANSWERS TO CORRESPONDENTS.

W. O. Lesley—The trouble with the strip of film which you enclose is that the gelatin has melted and run together, thus destroying the picture. Doubtless it was dried in the sun or by artificial heat. Warm solutions sometimes tend to the frilling of the gelatin around the edges of plate or film.

Carl H.—To turn a negative into a positive by development, carry on the development until the image may be seen distinctly on the back of the plate. Rinse off the developer, and place the plate in a solution made up of ⅛ oz. of iodide of potassium, 1¼ oz. of bromide of potassium, and 12 ozs. of water. Let it remain in this solution five minutes, rinse well in running water, and return the plate to the developer, using each time fresh developer. This operation is continued until the negative image has turned to a positive. Fix and wash the plate as for a negative. Best results are obtained with pyro or ferrous oxalate developer.

Esther Dorn—An achromatic lens is one which has been made so that the images formed by it are free from color, as in a prism. You would find it very difficult to prepare developer tablets. You can make up developer powders by dividing a formula for a developer into portions which will make a powder sufficient for four ounces of water. This is a very good way to prepare one's developers if the developing process is an infrequent one. Many combinations of developers do not keep well in solution.

F. T. G.—Am glad you had such good results with the metol-potash developer from the formula given in the April PHOTO ERA. It is really a developer to "juggle" with and obtain some interesting results.

Fred. L.—By all means take a film camera on your journey to Nova Scotia. The facilities there for pursuing the art of photography are still rather crude. It would be wise for you to take with you films enough to last during the trip. A small collapsible dark-room lantern will be found very useful unless you carry a daylight camera.

Kathryn B.—Circulars in regard to the Round Robin Guild and the Historic Picture Guild will be mailed you. Valley Forge is one of the great historic places of the country. We shall be very glad to have an able worker in that locality. In the PHOTO ERA of February is a fine picture of Valley Forge in winter.

H. Burnsside—In the January number of the PHOTO ERA you will find in the Round-Robin Guild department directions for making lantern slides by contact. You may use either films or plates. The process is very simple, and results usually satisfactory, if the negative is a good one.

Genie L. H.—A complete guide to photography is yet to be published. There are a number of text-books, but none that would be called complete. If you are pursuing some special line of photography it would be wiser for you to consult files of the photographic magazines and see what expert workers have to say in regard to it. Up-to-date articles are far more helpful than a book which was published five or six years ago.

Dennis T.—Yes; silver prints may be toned with platinum, and the tones are very pleasing in color and as permanent as tones made with gold.

Frances Deane—Use a glass rod for stirring all chemical solutions. A metal rod is sometimes acted upon by the ingredients, much to the detriment of the solution. Glass rods cost five cents each.

Notes and News

NEW YORK At the last regular meeting of the Amateur Photographers' Club, 310 West 53rd street, the following officers were elected for the ensuing year: President, E. Polasek; vice-president, Dr. L. C. LeRoy; secretary, J. J. Devantery; treasurer, E. H. Leis; Board of Council, D. W. Craig, M. F. Campbell, C. Gammon, J. Hunter, T. Cadigan.

The Club has just moved into new quarters at the above address where they are very comfortably housed.

A commodious and well-equipped dark room has been built, a feature of which is a novel and perfect system of ventilation, which will be appreciated by the members in the coming warm weather.

The Club possesses a small but exceptionally well-selected library, which is being added to daily.

The basic principle of the Amateur Photographers' Club is mutual help, and beginners are especially looked after. The dues have been made so low that they need not bar any amateur from joining this club.

Regular meetings are held on the first and third Fridays of each month, and the club-rooms are always open to members or visitors. Amateur photographers are cordially invited to visit the rooms, where some of the work of members is always on exhibition.

A thoughtful member of the Amateur Photographers' Club, 310 W. 53rd street, New York City, has introduced what he thinks is an innovation.

He presented to the Club an album of generous size, to be kept in the club-rooms, in which each member is expected to place, from time to time, prints from his pet negatives.

One member has been appointed to look after this album, insert the prints, trim them, letter and title them properly, and take care of the book generally.

Thus the best work of each member will always be accessible to the others for purposes of comparison, and the friendly rivalry thereby originated will undoubtedly serve to stimulate individual effort and elevate the work of the club as a whole.

BROOKLYN, N. Y. The Brooklyn Camera Club, 776 Manhattan avenue Brooklyn, N. Y., is a live organization and no doubt of great educational value to its members. On April 30, there was an exhibition of lantern slides, loaned by the Orange, N. J. Camera Club; May 6, a lecture was given by Dr. von Wachtel, on "Light and Color in Photography;" May 13, there was a club entertainment; and on May 21, Capt. George Musgrave lectured on Cuba.

ROCHESTER, N. Y. Bausch & Lomb Optical Company, Rochester, N. Y., advise us that there seems to be some misunderstanding among those who would like to enter their Three Thousand Dollar Quarter Century Photographic Competition, with regard to the basis of judging, as to whether the awards will be made to those whose work corresponds with their own particular ideas of photographic excellence, or with those laid down in the basis of judging adopted at the time of issuing the original offer, and which are embodied in a booklet which can be had, by any one desiring to enter the competition, on request. The Bausch & Lomb Optical Company wish to state that as this competition is one intended to demonstrate the photographic possibilities of high-grade lenses, it was thought best to adopt at the outset a basis of judging which would give the competitors not only an idea of what was aimed at in establishing the competition, but the basis upon which prints would be judged, and this basis will be strictly adhered to by the judges in making their awards.

We have just received a copy of the Century Camera Co.'s Catalogue for 1903. Besides the general excellence of the Century Camera, which is now well known to the photographic public, there are one or two specialties to which we would call special attention. The Century Curtain-Slide Shutter which gives a speed up to one twelve hundredth part of a second. This is certainly one of the most valuable photographic novelties of the year, and we confidently predict a large sale for this useful instrument. Also the McCorkle Needlehole attachment to the 1903 model of the Century Camera is an ingenious invention.

We have already shown, in a previous issue of the Photo Era, examples of the work done with it by its inventor, Mr. Jas. H. McCorkle. It is fully described in a special booklet which will be mailed on request, by the Century Camera Co., Rochester, N. Y.

One of the handsomest catalogues that has reached us among the 1903 publications is that of the Gundlach-Manhattan Optical Co., Manufacturers of Korona cameras, photographic and other lenses, prism binoculars, microscopes, etc. The officers of this company are experts in the matter of camera construction and the making of lenses, hence the excellence of the Korona camera and the Gundlach lenses. The consolidation of the Gundlach and Manhattan Optical companies has resulted in increased capitalization and increased output, for both companies, of a higher order of excellence than ever before.

June 1903 25 Cents

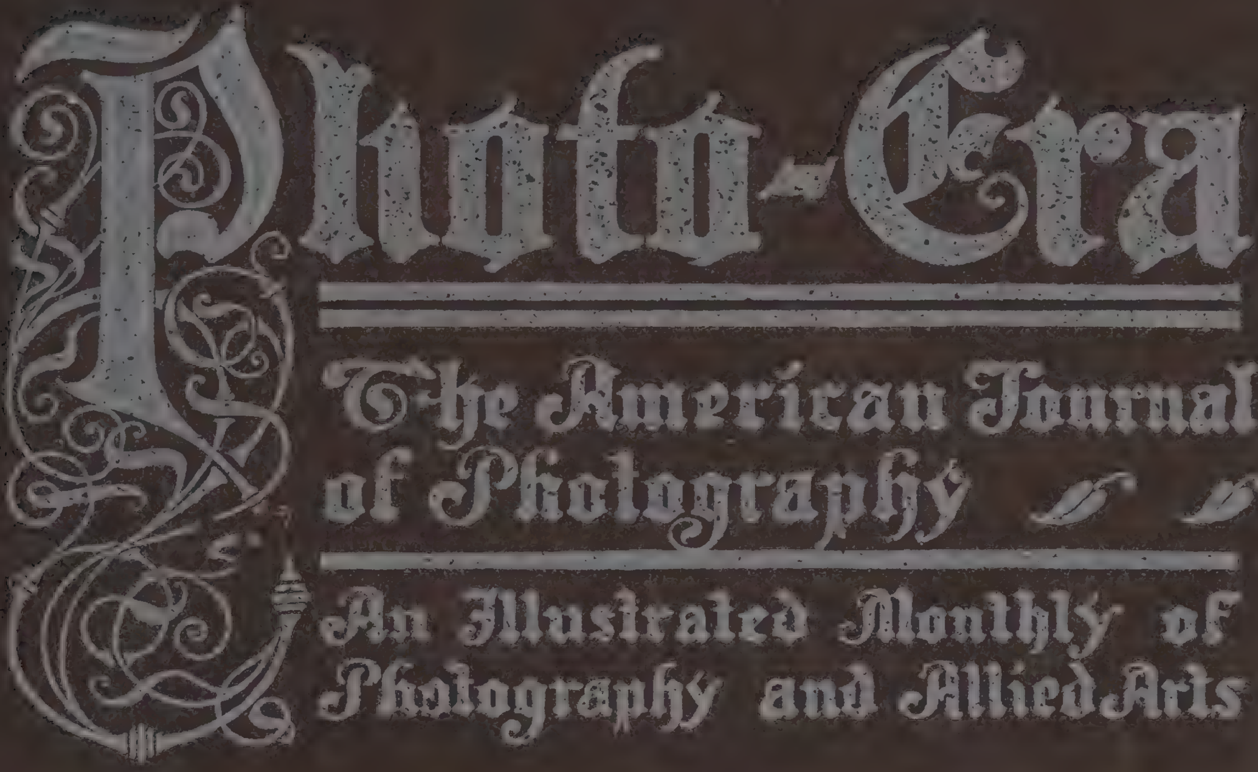


Photo-Era

The American Journal of Photography

An Illustrated Monthly of Photography and Allied Arts

Child Life Number

Boston, Philadelphia, Chicago,

To Mount a Print

¶ To mount a print on an unsympathetic background is much as though one planted a seed in barren soil. Any print which is worth mounting is worth mounting well, and a little thought should always be taken to discover the most perfect harmony possible between the print and the mount; hence the collection of varied tints, ranging from the soft, delicate effects in Taffeta to the strong, virulent tones, oriental in their effect, of the Sultan, manufactured by Niagara Paper Mills, which (as Jasper says, "All the world knows") lie over against the Eighteen Mile Creek in the lower town of Lockport, New York. ❧

¶ A sample book, showing sixty unusual color effects, to be had for the asking. Write to them and they will refer you to your most convenient distributing point.

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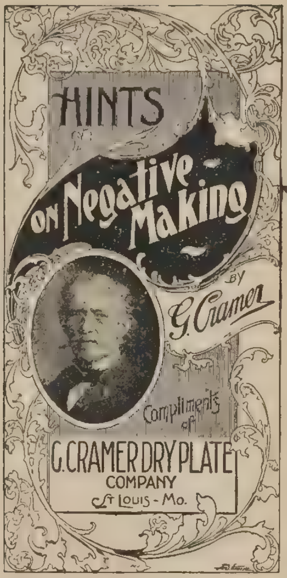

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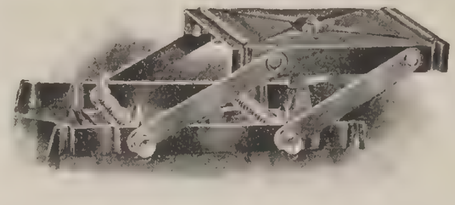

Stereo-Simplex

("Flip-Flop" Tripod Top)

Self-Adjusting Parallelism

Patented in U. S. A., Nov. 11, 1902 Foreign patents pending

CAMERA IN POSITION.
First Exposure.

THIS new article, designed to **produce stereoscopic pictures with any ordinary hand, or single lens camera, or kodak,** is a light, compact mechanical device, simple in construction, of a small pocket size, and easy to manipulate. Whether you are equipped for films or plates it serves the purpose equally well. In use **it is interposed between the tripod and camera,** and, after the first exposure is made, allows instantaneous self-adjustment in new position, the camera being moved parallel sideways a distance corresponding to the distance between the human eyes; then the second exposure is made. Its ingenious construction guarantees **perfect parallelism** of the camera in the two predetermined positions absolutely necessary for the stereoscopic effect.

CAMERA SWUNG OVER.
Second Exposure.

Stereo-Simplex ("Flip-Flop" Tripod Top) . . .	$1.25
Stereoscopic (Aluminum Hood and Lens Lock) .	1.00
Stereo-Simplex and Stereoscope, together . . .	2.00

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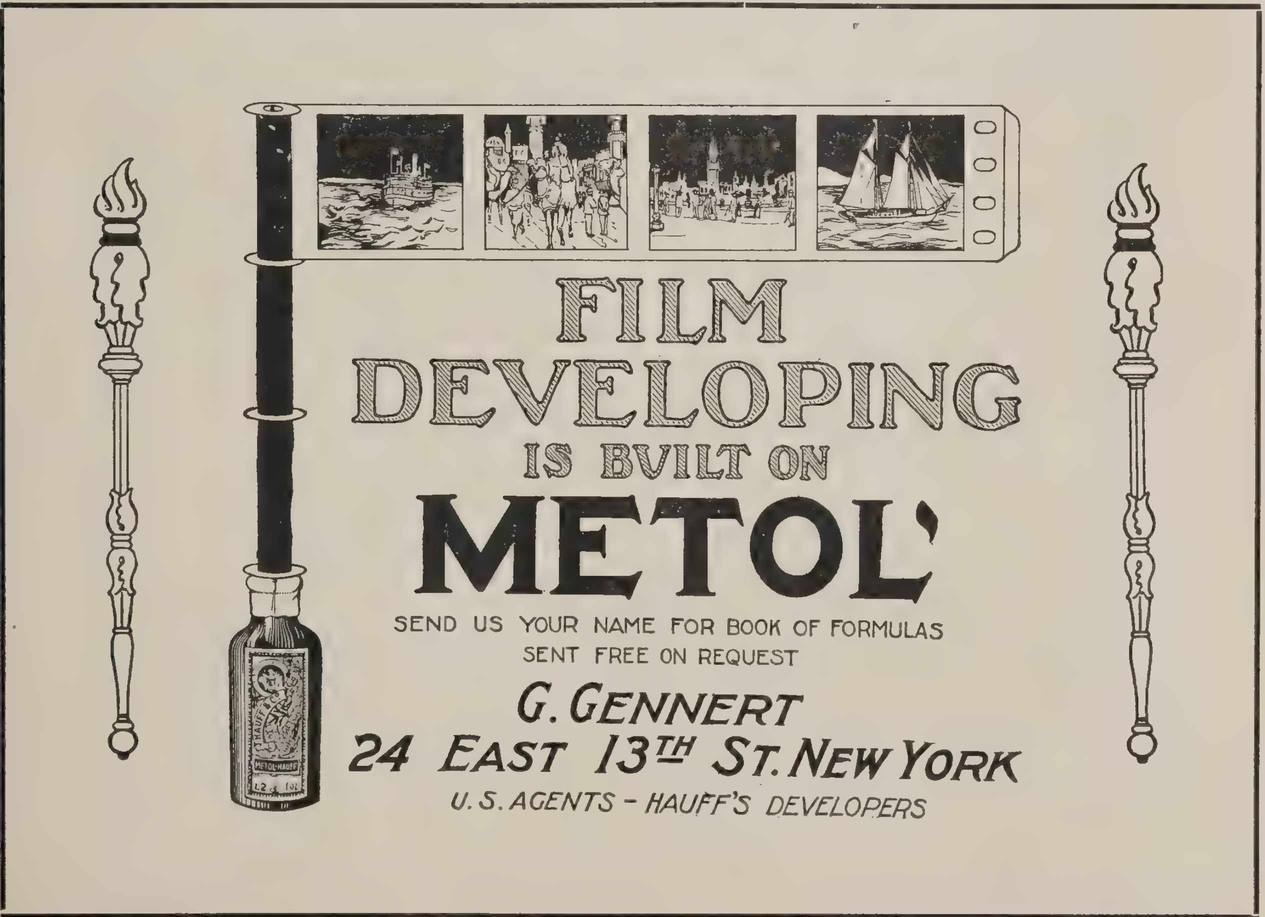

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YOU would not buy a watch for the beauty of its case alone, regardless of the works. Yet thousands of Cameras are bought each month, and the selection made because of the attractiveness of the box.

THE LENS

constitutes 99 per cent of the Camera's value and bears the same relation to the Camera that the works do to a watch.

THE BOX

of a Camera, whether made of the most expensive mahogany or the cheapest pine, has only one object—to exclude the light. Therefore when selecting a Camera look to the Lens, for it alone will be responsible for your success or failure.

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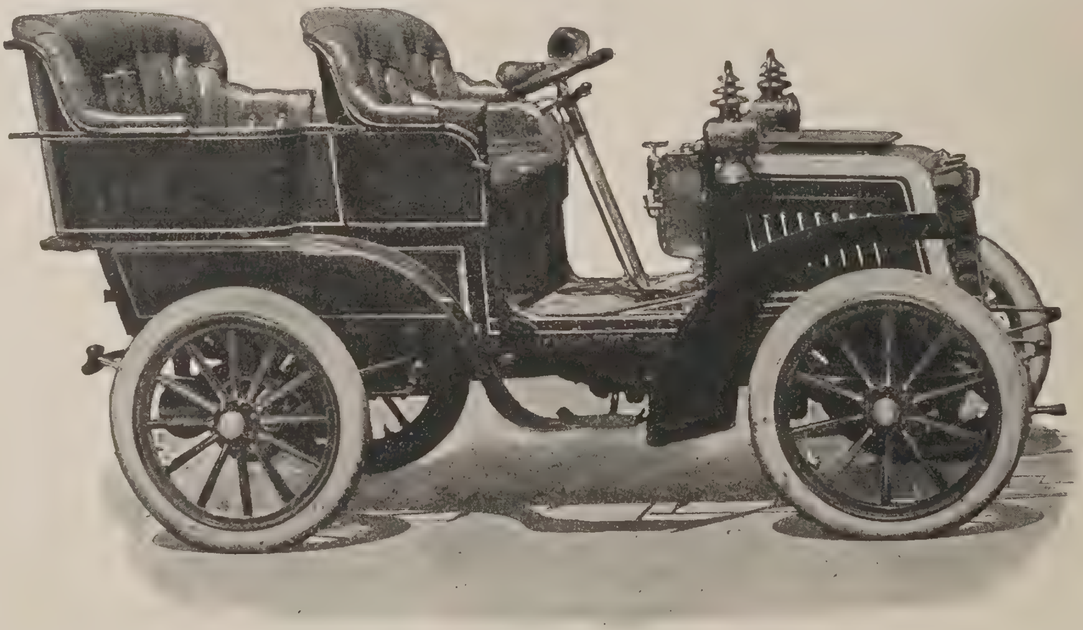

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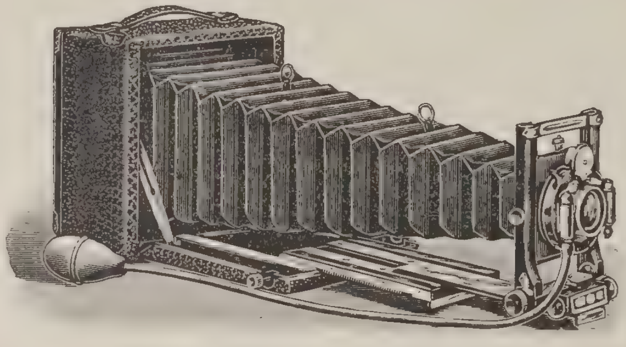

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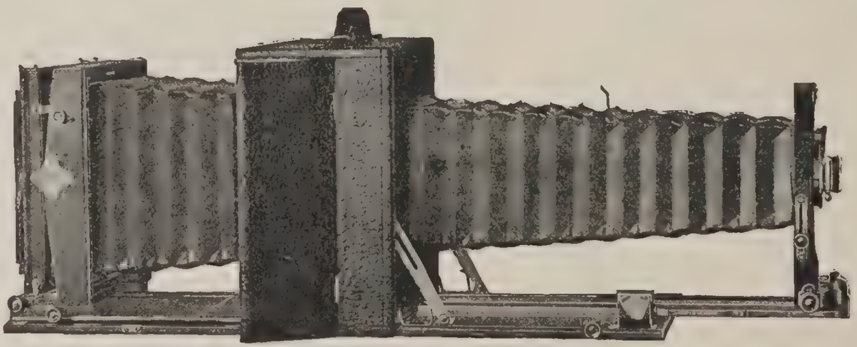

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(To be continued in — the 1903 KORONA CATALOGUE.)

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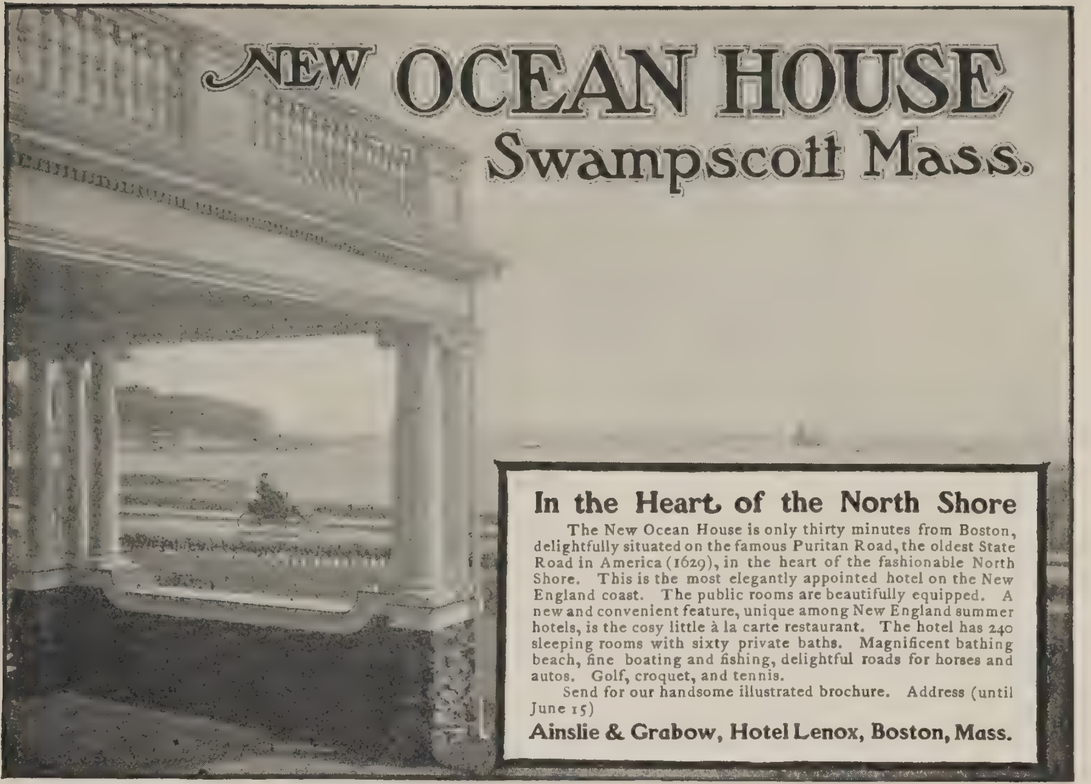

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If your dealer does not carry this line communicate with the Photo Era.

N. B. Owing to an accident to the press in printing the May issue, the frontispiece could not be printed, as planned, on Japanese vellum. The half-tone print was mounted on Japan vellum.

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The July issue of the PHOTO ERA will be devoted largely to

HISTORICAL PICTURES

¶They will appeal to the patriotic and artistic impulses of our readers, and will be the first instalment of the work done by the National Historic Picture Guild of America.

¶Orders should reach us early as the edition is likely to be exhausted.

PHOTO ERA PUBLISHING CO.
170 SUMMER STREET, BOSTON

JUNE ROSES By MARION S GAINES

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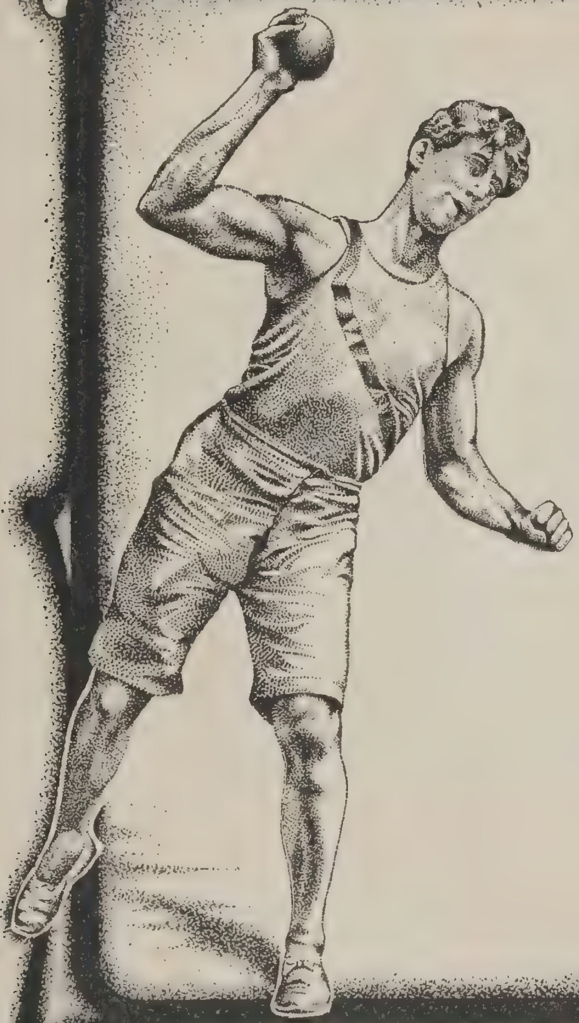

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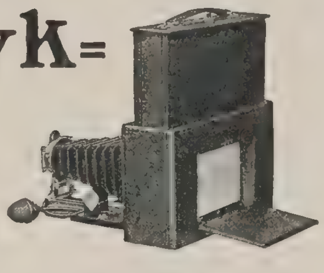

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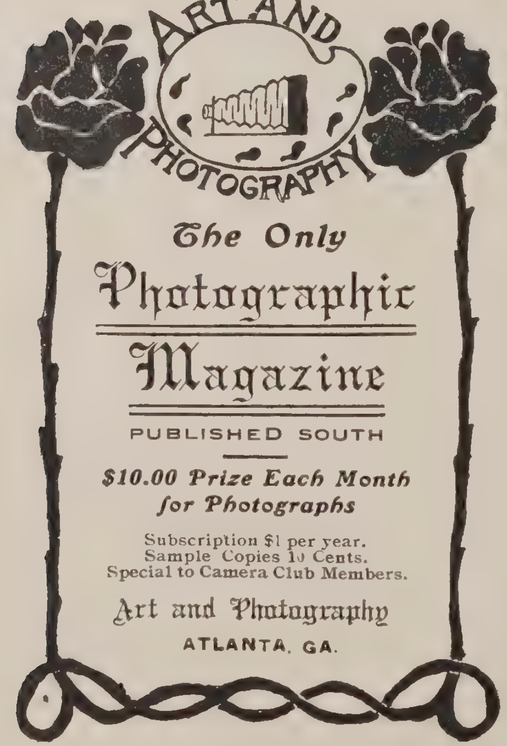
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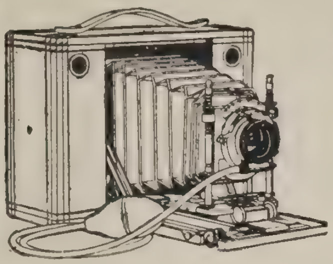

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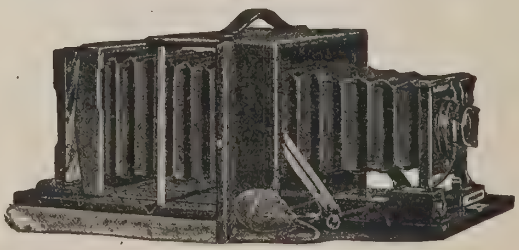

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START RIGHT.

ALFRED WATKINS ON THE FUTILITY OF BROMIDE FOR OVER-EXPOSURE.

In our printed matter regarding the Kodak Developing Machine we have frequently had something to say about the futility of the use of bromide as a restrainer after development has once gotten under way ; have stated that the temperature and length of development give to the operator all the control required. Mr. Alfred Watkins in a recent letter to the British Journal of Photography puts this matter very happily. He says :

"There is nothing whatever in my method which prevents me, should I so desire it—from altering the proportions of the developer before I pour it on, and thus securing the "holding back" power of the lower tones which bromide confers. But experience shows that such additional method of control is only useful for great over-exposure, and as in order to exercise it I must be aware of the over-exposure before I pour on the developer, the conclusion forces itself upon my perhaps over practical mind that I might just as well be aware of the over-exposure a little earlier still, and give the plate a correct exposure instead."

He has hit the nail squarely. If one must know beforehand that a negative is over-exposed in order to control development why not go back just a little farther and start right by exposing correctly.

Time development has come to stay. It would have come anyway but the Kodak Developing Machine has forced the issue. The regularity with which it turns out negatives of a quality superior to those obtained by the old methods is an unanswerable argument. Of course the wide latitude of Kodak Film has helped, because it makes the starting right—the giving of a "correct exposure"—easy. The new method will not give a good negative from a snap-shot with a small stop, made in the woods, nor from a time exposure made upon a sun-lit marine—neither by any possibility could the old method, but within the wide limit of the film, timed machine development gives better printing negatives than are secured by the old method. Thousands are proving it by their work.

PHOTOGRAPHIC COMPETITIONS.

For the benefit of those interested, we will give here each month, a bulletin of the important photographic con tests in progress throughout the United States.

Bausch and Lomb Optical Company, Rochester, N. Y., International competition. $3000 in prizes. Closes October, 1903.

C. P. Goerz Optical Works, 52 Union Square, E., New York. Cup competition for professionals. Closes August 1, 1903.

C. P. Goerz Optical Works, 52 Union Square, E., New York. International competition. Open. $1500 cash prizes. Closes June 30th, 1903.

Leslie's Weekly, 110 Fifth Avenue, New York. Weekly competition, open to amateurs. Prizes, $10, $5, $1.

Buffalo Express, Buffalo, N. Y. Continuous contest. Prizes, $5 to $25 weekly.

Recreation, 23 West 24th Street, New York. Eighth annual amateur competition. Forty prizes in photographic and sporting goods. Closes November 30, 1903.

Ladies' Home Journal, Philadelphia. Pictures of rooms or churches decorated for weddings. 10 prizes aggregating $200. Contest closes July 1, 1903.

Ladies' Home Journal, Philadelphia. Pictures of prettily decorated tables. 10 prizes with a total of $225. Closes August 1, 1903.

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Double weight Velox, W. D. Platinum and Eastman's Sepia Papers all give beautiful effects when treated in this way, especially if they have also a plate sunk center, which they may readily be given with an Eastman Embossing Board. To equip one's self for this new and artistic method of treating prints a very inexpensive outfit is required:

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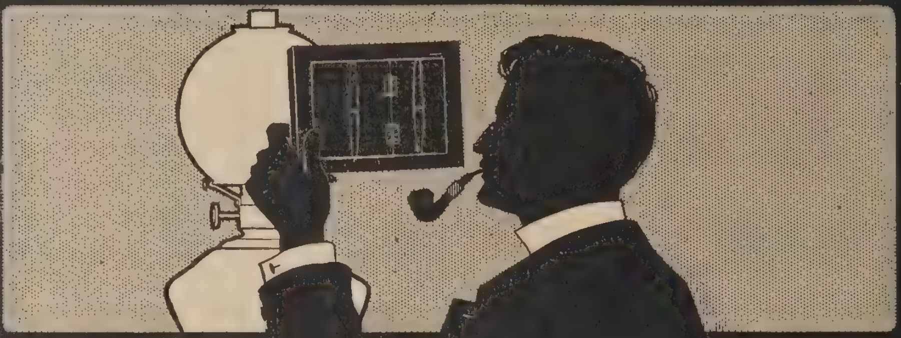

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SECOND—The fine grain of the Seed Plate gives negatives with a transparency and printing quality in the high lights which cannot be approached. A wonderful range of gradation is thus preserved and the tone rendering is exquisite throughout. In this respect no other plate is in its class.

THIRD—There is no plate which approaches the Seed Plate for uniformity in speed and quality. Uniformity and quality in materials give confidence in one's work. Success is half won if the materials are well chosen and really reliable.

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